

INTERNATIONAL LABOUR OFFICE

HOURS OF WORK AND UNEMPLOYMENT

REPORT TO THE PREPARATORY CONFERENCE
JANUARY 1933

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GENEVA

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1

PREFATORY NOTE

This report has been prepared in consequence of the decision taken by the Governing Body on 22 September 1932. It has been compiled in the space of two months out of the material which the Office already possessed, with such additional data as were immediately procurable. It deals with a subject of admitted complexity and difficulty, many aspects of which are still far from having been fully explored, while on others important researches are being conducted in various countries. In these circumstances, the present report does not claim to be exhaustive or final. It may be regarded as a first attempt to study internationally a problem which is being everywhere recognised as one of far-reaching importance and which is bound to engage the attention of industry for a considerable time to come.

CONTENTS

	Page
PREFATORY NOTE	v
INTRODUCTION	1
CHAPTER I: <i>The Problem</i>	11
§ 1. Gravity of the Unemployment Situation	11
§ 2. Technological Unemployment.	15
§ 3. Steps towards an International Reduction of Hours of Work	21
CHAPTER II: <i>The Possibility of Re-Employment through a Reduction of Hours of Work</i>	24
§ 1. Actual Hours of Work	26
Extent of Short Time	26
Extent of Overtime	32
Administrative Measures for Reducing or Abolishing Overtime	32
Statistics of Overtime	34
§ 2. Possibilities of Re-Employment.	38
Some Practical Considerations	44
CHAPTER III: <i>Methods of Reducing Hours of Work</i>	48
§ 1. Possible Methods	48
Number of Workplaces or Machines Available in an Undertaking in relation to the Number of Workers to be Employed	48
Working Period of the Undertaking	49
Methods Allowing of the Simultaneous Employment of More Workers.	50
Methods Allowing of the Employment in Rotation, or by Shifts, of More Workers	51
§ 2. Choice of Method according to Nature of Work.	56
Continuous Work	56
Discontinuous Work Performed by Two Shifts	58
Discontinuous Work Performed by One Shift	59
§ 3. Practicability of the Different Methods.	59
CHAPTER IV: <i>Practical Action</i>	66
§ 1. Action by the Public Authorities	66
Encouragement of Private Initiative.	67
Direct Measures.	68
Reduction in Services under the Direct Control of Public Authorities	68
Conditions Imposed on Public Works Contractors	70
Legislative Action	71

	Page
§ 2. Private Initiative	77
Continuous Work	78
Food Industry	79
Chemical Industry	81
Petroleum Industry	81
Paper Industry	83
Rubber Industry	83
Glass Industry	84
Discontinuous Work	85
Mining	85
Food Industry	86
Chemical Industry	86
Tobacco Industry	87
Printing Industry	87
Textile Industry	89
Metal Industry	89
Motor-Car Industry	89
Shipbuilding	91
Mechanical and Electrical Engineering	91
Building Industry	92
Salaried Employees	93
Postal, Telegraph and Telephone Services	94
Hotels and Restaurants	94
CHAPTER V: <i>Possibilities of International Regulation</i>	98
§ 1. General Lines of International Regulation	99
§ 2. Non-Rigid Type of Convention	103
Figure for the Weekly Maximum	108
Exceptions for Overtime and Extra Time	109
Scope	110
General Criterion	110
Industrial Undertakings	111
Commercial Undertakings	112
Special Regimes for Certain Extra-European Countries	114
Summarised Outline of a Possible Convention	115
Wages	117
Supply of Information	118
I.—Is a Solution of the Problem Desirable and Possible ?	119
II.—What Should Be the Main Lines of International Regulation ?	119

APPENDICES

APPENDIX I: <i>Unemployment Statistics</i>	121
Table I. General Level of Unemployment	123
Table II. Statistics of Unemployment, by Industries	145
Table III. Statistics of Employment, by Industries	153
APPENDIX II: <i>Changes in Output per Worker since the Beginning of the Post-War Period</i>	164
APPENDIX III: <i>Short Time and Overtime</i>	177
APPENDIX IV: <i>Wages as an Element in the Cost of Production, 1926-1931</i>	191

INTRODUCTION

In order that the Preparatory Conference may be acquainted with the circumstances which led to its convocation, for the purpose of considering the prospects of remedying unemployment by a reduction of hours of work, it may be useful to recall the previous history of the question.

The reduction of hours of work as a measure likely to alleviate the effects of unemployment was suggested to the Unemployment Committee of the Governing Body at its Session of January 1931 when it was considering the question of practical remedies. Opinion was divided on the point, however, the workers' representatives suggesting that "a reasonable shortening of the working day or week, taking into account the increase in output obtained by improved methods of production", should be advocated, while the employers' representatives on the other hand considered such a reduction of no avail and even likely to defeat the object in view. The Committee invited the Office to pursue its investigations in order to lead at a later date, if possible, to a narrowing of the gap between the two points of view and to positive action, and the Governing Body approved the conclusions of the Committee.

A few months later the Director of the International Labour Office, Albert Thomas, suggested in his report to the Fifteenth Session of the International Labour Conference that a fresh endeavour should be made to secure general ratification of the Washington Convention on hours of work; that the question of overtime should be reconsidered with a view to fixing an international maximum; and that the international reduction of the working day to less than eight hours in certain industries should be sought. On the proposal of the Japanese Government delegate, Mr. Yoshisaka, the Conference concluded its discussion on the question of unemployment by requesting "the Governing Body to consider the effect which might be given to the proposals which had been made for the continuance and development of the action of the International Labour Organisation to remedy unemployment and its consequences".

In October 1931 the Governing Body discussed the best means of giving effect to this resolution on the basis of two alternative proposals. The first, submitted by the workers' group, proposed that the Director should be authorised to get into touch with the Governments with a view to calling a conference at which the States Members would be represented by tripartite delegations. This conference would consider the problem of unemployment from the point of view of the possibility of arriving at an agreement by which the contracting States would undertake to enforce a reduction of hours of work corresponding to the need of absorbing the largest possible number of unemployed. This proposal was rejected by 8 votes to 6. The other resolution, submitted by the French Government representative, Mr. Picquenard, was adopted by 14 votes to nil. It authorised "the Director of the International Labour Office to call a meeting of the Unemployment Committee before the end of the year, in order to inform it of the progress made in the work already undertaken and to allow it to discuss the possibility of arriving at a more satisfactory arrangement of hours of work by means of international agreement, whether general or by industry".

The Unemployment Committee of the Governing Body was accordingly convened on 7 and 8 December 1931. It adopted a draft resolution, the final terms of which were settled at its session of 13 January 1932.

In view of the importance of this resolution, which was adopted by the Governing Body by 15 votes to 3 at its Session of January 1932, it has been thought advisable to reproduce it in full.

The Unemployment Committee,

Having regard to the increasing gravity of the unemployment crisis,

Recognising that the crisis can only be solved by the adoption of economic, financial and political measures which are outside the competence of the International Labour Organisation,

Urges Governments in the first place actively to explore every possibility of increasing employment both nationally and through the international organisations,

Urges in particular that the international action which has been undertaken with regard to public works should be pushed forward with the greatest possible energy.

In conformity with the resolution adopted by the Governing Body at its Session of October 1931, the Committee has devoted special attention to "the possibility of arriving at a more satisfactory arrangement of hours of work by international agreement, whether general or by industry";

Taking note of the fact that in all industrial countries efforts of various kinds have been made spontaneously in the majority of undertakings for the purpose of keeping in employment the largest possible number of workers in spite of reduced production:

The Committee draws the attention of all industrial communities to the measures referred to below, some of which have already been applied, either completely or partially.

The Committee considers that in the present circumstances it is more than ever desirable that the International Conventions on hours of work, and, in particular, the Washington Convention, should be ratified, and that in any case pending ratification their principles should be, or continue to be, universally applied so as to constitute a solid framework for all the arrangements proposed below:

(1) Overtime should be abolished. In exceptional cases, in which that is impossible owing to technical difficulties, seasonal requirements, or the necessity of complying with a time limit in executing orders subject to a penalty for non-fulfilment, it should be reduced to a strict minimum.

(2) Whenever the technical conditions, the composition of the staff and the individual position of each wage earner permit, the hours of work of each worker should be diminished for the whole of the staff in preference to discharging workers. This diminution may be brought about by reducing either the number of hours per day, or, preferably, the number of days per week. It may also be achieved by a periodical rotation of workers over a period of weeks. The Committee draws attention to the measures taken in certain countries to facilitate these practices by paying unemployment benefits during the period of idleness.

(3) In spite of serious difficulties, which, however, it would seem possible to overcome, and subject to technical, commercial and financial possibilities, the principle of diminishing temporarily the hours of work of each worker should be adopted in those undertakings which are working at normal capacity so as to make it possible to engage unemployed workers in those undertakings.

(4) With a view to redistributing employment among as large a number of workers as possible, while at the same time preserving the satisfactory working of the establishment and maintaining the individual earnings of the workers at an adequate level, it appears that under the conditions of the present crisis the best results have been obtained by reducing the weekly working period to a figure approximating to forty hours, distributed over the week by different methods, but preferably distributed equally over five days where the technical conditions allow.

(5) The Committee thinks it desirable to draw attention to the fact that in certain countries measures have been adopted to make up for the possible reduction in weekly earnings, at least in part, and that this has been facilitated by a decrease in social charges due to the re-employment of a certain number of wholly unemployed persons.

(6) It considers it desirable to draw attention to the importance of the measures adopted in the legislation of different countries to safeguard the rights to superannuation or to insurance benefits of workers subject to these special arrangements concerning hours of work.

The Committee recalls that, without wishing to take the initiative in bringing about international negotiations, certain Governments have expressed a desire that temporary agreements concerning hours of work should be arrived at in certain industries. It invites the Director to study these suggestions or desires, to consider in respect of different industries whether the situation is such as to render international agreements possible and, if so, to offer his services to the Governments concerned with a view to convening any meeting which may be considered useful for this purpose.

The Committee had a mandate at its present Session only to study arrangements of hours of work during the crisis. It has taken note of the desires of the workers' organisations in favour of the forty-hour week, and also of the opinion formulated by certain industrial employers that when prosperity has been re-established a permanent reduction of hours of work might be possible in those industries in which technical progress has been considerable.

It invites the International Labour Office henceforward to pay particular attention to this question in the course of its investigations with a view to submitting the information obtained, especially on the experience gained in certain cases, to the Governing Body at a later date.

In communicating the text of this resolution to the Governments of the States Members, the Office pointed out that the suggestions it contained though not in the nature of formal decisions of the Conference were nevertheless of such importance and might render such service as to justify their communication.

At its session of 2 March 1932, the Unemployment Committee which had been specifically instructed by the Governing Body to make a thorough investigation of the whole situation, drafted the following resolution, which was adopted by the Governing Body by 15 votes to 7 in April 1932:

The Unemployment Committee,

In view of the resolution adopted by the Governing Body in January 1932 ¹,

In view of the resolution adopted by the Advisory Committee on Salaried Employees in April 1931,

Recalling its previous declarations on the gravity of the unemployment crisis,

In order to limit the discharge of salaried employees and to encourage their re-engagement as much as possible, recommends the following measures to the attention of Governments and industrial communities:

1. In present conditions it is more than ever desirable that the Draft Convention concerning the regulation of hours of work in commerce and offices be ratified, and that in any case pending

¹ This resolution recommended, in addition to the reduction of hours of work, the development of free employment exchanges, the international adoption of a more liberal policy for organising the labour market, and the retraining of unemployed salaried employees with a view to their entering another occupation.

ratification its principles should be, or continue to be, universally applied.

2. It is extremely desirable that overtime should be continued only if the technical conditions, seasonal requirements or emergencies make it absolutely necessary.

3. It is desirable that the measures relating to the application of the weekly rest day and also all regulations or customs relating to holidays should be strictly observed.

4. It is desirable that salaried employees should be discharged only in case of absolute necessity, irrespective of the nationality of the salaried employee, and that for preference steps should be taken, whenever the technical, commercial, and financial conditions allow, to reduce the hours of work or, in cases in which such a measure is possible, to organise a rotation system. Measures of this kind are also recommended with a view to encouraging the re-engagement of salaried employees.

5. The question of remuneration should be considered separately in each undertaking, and should be settled as far as possible by means of temporary modifications in existing contracts, efforts being made to maintain the aggregate earnings of the whole body of salaried employees in employment, including those who are re-engaged.

6. The Committee, without making a complete study of the questions of notice of dismissal and of dismissal allowances, recommends, in present circumstances, that the measures in force on these subjects in the different countries be applied in a liberal spirit, account being taken in particular of length of service.

7. The Committee notes that the present crisis has shown the need for an extension to salaried employees of unemployment insurance and relief schemes. It recommends, in countries in which such an extension has not been carried out, that the question be studied as quickly as possible, care being taken to avoid overlapping between dismissal allowances and insurance or relief payments.

8. The present crisis has also shown the need for developing the public placing services for salaried employees, and making them more efficient. The Committee recommends that special departments be set up for these classes of workers, and that the public employment exchanges co-operate with private agencies which charge no fees.

A more definite standpoint in favour of a reduction of hours of work was adopted at the end of the discussion on this subject at the Sixteenth Session of the International Labour Conference. After minor modifications, the Conference adopted by 48 votes to 37 a resolution submitted by Mr. Jouhaux, French workers' delegate, urging the desirability of the legal institution of the forty-hour week:

In view of the continuance of the present depression with the sufferings it involves, it must be affirmed that palliatives are insufficient and that, if the suffering caused by the economic depression and by unemployment is to be mitigated, the causes of the depression must be directly attacked;

In view of its prolongation unemployment must no longer be regarded merely as an effect of the depression; it has become one of the causes which aggravate it;

The disequilibrium between disproportionately increased production and a capacity for consumption which was insufficient even at the beginning of the depression and which to-day is still further diminished condemns any policy of wage reduction which experience shows is in contradiction with economic requirements, in addition to being unjust;

The principal means of restoring the equilibrium which has been upset must be sought in the reduction of hours of work. The increase in individual output renders this measure indispensable and urgent. By this means production can be adjusted to the level of a temporarily limited capacity of consumption, available work can be permanently distributed over a larger number of persons, and the unemployed can be reinstated in their positions in the economic system. Further, by this means the wage earners will secure a legitimate share in the benefits of technical progress;

The Conference accordingly invites the Governing Body of the International Labour Office to investigate the question of the legal institution of the forty-hour week in all industrial countries, with a view to the early adoption of international regulations on the subject.

Before the next meeting of the Governing Body at which the effect to be given to this resolution was to be considered, the Italian Government representative, Mr. de Michelis, addressed a letter to the Chairman on 25 July 1932, in which, in view of the increasing gravity of the crisis, he requested, in conformity with Article 389, paragraph 1, of the Treaty of Peace, that a special Session of the Conference should be held before the meeting of the World Economic Conference. This document sets forth the views of the Italian Government and is sufficiently important to be reproduced in full:

At its Fifty-fifth Session, the Governing Body adopted a resolution put forward by the Unemployment Committee which, in connection with the regulation of hours of work during the depression, noted the desires of the workers' organisations and the opinion expressed by certain manufacturers as to the possibility of a permanent reduction of hours of work in industries where technical progress is very advanced. The Governing Body consequently requested the Office to make an exhaustive study of this question in order to be in a position to furnish it with precise details as to the result of the investigation undertaken.

Subsequently, the Sixteenth Session of the Conference adopted by a very large majority a resolution which affirmed the necessity of putting an end, by reducing hours of work without reducing wages, to the continuance of unemployment, regarded as a cause and not a consequence of the aggravation of the crisis arising out of the discrepancy between production and consumption; the resolution called attention to the urgency of taking that step, and requested the Governing Body to study the question of the

introduction of a forty-hour week in all industrial countries with a view to the adoption in the near future of international legislation.

Since then, the depression has grown worse, and in spite of the favourable time of year the armies of unemployed are rapidly increasing. It is impossible to foretell with any precision the pace at which their ranks will inevitably increase during the coming autumn and winter. It is, however, obvious that the social consequences, which are already serious, will become intolerable.

Under pressure of the crisis the redistribution of labour upon the different national markets is effected to a large extent by legislative measures or labour agreements. This redistribution, which is carried out haphazard and is therefore not so effective as it should be, can only be ensured by international agreements which would guarantee the industries of each country against foreign competition and would thus, by forming a solution to the crisis and a permanent improvement in the standard of living, lead to the only practical result, namely, a decrease in hours of work without a consequent decrease in the standard of living of the masses.

It is for this reason that international action is of immediate necessity. It is not so much necessary to "define" to what extent the technical progress realised between 1919 and the present day would allow a further reduction in hours of work due to increased output. It is necessary to lay down *immediately* a uniform international scale which even though only approximate for the moment would allow the reduction of hours of work as a means of combating unemployment, and in general as a means of re-absorbing a part of the unemployed in the machinery of production.

The writer of this letter, as Delegate of the Royal Italian Government, was in agreement with the late Director, Albert Thomas, in unofficial conversations, as regards the possibility of international action.

Subsequently, on 15 June last, the National Council of Corporations of the Kingdom of Italy adopted a resolution calling for international agreements with a view to obtaining a permanent reduction in hours of work as a consequence of technical progress and as a means of combating the lamentable results of the crisis.

It appears to me that the same problems must arise and that a similar solution is required in other countries. Public opinion is not only prepared to accept international action, but insists upon it. As the Governing Body recognised at its January Session, it is only the International Labour Organisation which could initiate such action.

If, as seems probable, the new World Economic Conference is convened in the near future, it will have every occasion to welcome the indispensable contribution which the International Labour Organisation would be able to supply in the form of definite draft agreements for the solution of the fundamental problem, not only of improving economic prospects but also of permanently restoring industrial prosperity.

The studies which the Office has been making for some considerable time past and to which new material is added daily can already be considered as sufficient to form a solid basis of discussion. They could be completed in a few weeks. Moreover, the discussions of the International Conference could be confined to the solution

of the different problems which might arise: technical problems, the most important of which concern the reduction of the working day, or preferably the working week, and the rate of wages after the reduction, which should not be decreased; and problems of procedure, namely, whether it is desirable to proceed by general measures or by specific measures according to industries, by absolute rigid measures or by measures to be taken as a result of collective agreements, by measures drawn up by the International Labour Organisation or decided upon under its auspices, and taken by the various countries or by the international economic groups concerned.

In the opinion of the Delegate of the Italian Government the important point for the moment is to convene a *special Session of the Conference* in accordance with paragraph 1 of Article 389 of the Treaty of Peace, to be held according to any emergency procedure which may exist or which may have to be devised, in the next few months, namely, before the crisis becomes worse and before the World Economic Conference is convened, *in order to draw up proposals which could be put into immediate operation as regards hours of work*. The foregoing proposal is justified by the fact that the Economic Conference will not be able to take immediate steps to remedy unemployment, and should it make proposals it could not fail to make use of the findings of that special Session of the Labour Conference.

The Delegate of the Italian Government has the honour to make a formal proposal that this special Session should be called under the terms and at the time indicated above, and that a *special Session* of the Governing Body should also be convened in order to take the necessary decisions in this connection. To this end I request you to be good enough to exercise your discretionary powers provided for in paragraph 2 of Article 11 of the Standing Orders of the Governing Body.

The Chairman of the Governing Body convened a special Session of the Governing Body on 21 and 22 September 1932, to consider the effect to be given to these suggestions. The following resolution was adopted by 16 votes to 6.

The Governing Body of the International Labour Office:

Being called upon to decide on the proposal of the Italian Government representative so that the International Labour Organisation may consider, as an urgent matter, the question of the reduction of hours of work, thereby also conforming to the resolutions of the Unemployment Committee and of the Sixteenth Session of the Conference,

Recognising that the intervention of the International Labour Office is necessary and urgent not only in view of the fact that the World Economic Conference is to be held shortly, but also in view of the possible economic and social consequences of a possible increase in unemployment,

The Governing Body of the International Labour Office decides:
To have the technical problems which will be set forth in a Report of the Office studied by a Tripartite Preparatory Conference to be held in January 1933 at Geneva;

To submit the conclusions of that meeting to the Governing Body of the International Labour Office at its January Session so that it may consider the desirability of communicating them to the coming World Economic Conference and possibly to the Governments, so that they may provide guidance for possible bilateral or multilateral agreements pending the possible decisions of the 1933 Conference;

To request the Secretary-General of the League of Nations to take the necessary steps to call a meeting of the Mixed Committee on Unemployment of the Committee of Enquiry for European Union as soon as possible, so that it may discuss the questions which have already been considered at previous Sessions with a view to their being taken up as soon as possible with suggestions for practical action, special account being taken of the question of international public works proposed by Albert Thomas.

As the question of placing the problem of hours of work on the agenda of the next Session of the Conference was not unanimously approved by the Governing Body, no immediate decision could be taken on that occasion. It was raised again at the Session of October 1932, when the Governing Body rejected by 14 votes to 7 a proposal to adjourn any decision on this subject until the results of the Tripartite Preparatory Conference of January 1933 were available. It then decided by 16 votes to 6 to place the following question: "The Reduction of Hours of Work, Report of the Tripartite Preparatory Conference" on the agenda of the 1933 Session of the International Labour Conference.

The principal aspects of the problem of the reduction of hours of work as a remedy for unemployment are discussed in the five Chapters of this Report. The first Chapter describes the present situation with regard to the problem of the reduction of hours of work; the second considers the possibilities of creating further employment by means of a reduction of hours; the many methods of reduction are discussed in Chapter III; the action taken by the public authorities, legislative measures and the principal experiences so far gained are analysed in Chapter IV. The final Chapter shows on what basis international measures might be adopted in the present circumstances.

CHAPTER I

THE PROBLEM

§ 1. — Gravity of the Unemployment Situation

The proposal to consider the reduction of hours of work has not been put forward on the ground that the forty-eight-hour week is excessively long, or that it imposes undue fatigue on the worker, or that it deprives him of a reasonable amount of leisure. The proposal has been advanced as a remedy for and a preventive of unemployment. This was emphasised in the resolution put forward by the workers' group and adopted by the International Labour Conference this year. The resolution proposed that the International Labour Office should investigate the question of the legal institution of the forty-hour week, basing the proposal on the ground that "by this means production can be adjusted to the level of a temporarily limited capacity of consumption, available work can be permanently distributed over a larger number of persons, and the unemployed can be reinstated in their positions in the economic system".

When Mr. de Michelis raised the matter in July on behalf of the Italian Government, he approached it from the same standpoint. He referred to the resolution adopted by the National Council of Corporations "calling for international agreements with a view to obtaining a permanent reduction in hours of work as a consequence of technical progress and as a means of combating the lamentable results of the crisis", and pointed out that since the adoption of the resolution of the Conference the crisis had grown worse and unemployment had increased.

The problem therefore which the Preparatory Conference has to consider is the reduction of hours of work in relation to unemployment.

It is unnecessary to insist on the gravity of the situation which has resulted from the present crisis, but it may be well to recall certain particularly striking facts.

At the moment of writing, a very large proportion of the working

population is idle in almost every industrial country. The extent of unemployment during recent years among different groups of industries and occupations in each country is given in a series of tables appended to this report¹. These statistics only relate to unemployment recorded by the different countries, and are in most cases far from complete. Nevertheless, it will be seen that towards the end of 1932, two countries for which fairly complete figures exist, namely, Germany and the United Kingdom, had nearly 5½ million and 3 million workers respectively recorded as unemployed. In the United States, where official data are lacking, it is generally accepted that at least 11½ millions are out of work. In every country without exception unemployment has enormously increased in recent years and at the present time one-quarter, and even one-third in some cases, of the workers are unable in most industrial countries to find work. It seems safe to say that in the world the unemployed at the present time number at least 30 millions.

The coming winter will involve greater and more widespread distress than has been known this century. The social consequences of the collapse of prices and of confidence are so painfully evident as to need no further demonstration. Attention may, however, perhaps be called to some of the economic consequences of unemployment which are not always fully realised, but which tend to aggravate the depression.

In the first place, the maintenance of the unemployed has placed a tremendous burden on the finances of every industrial State. The duty of ensuring a bare subsistence to those who have been deprived of the means of earning a livelihood through no fault of their own has been generally recognised. Huge sums are being expended by Governments, municipalities and private organisations in relieving the unemployed. Thus, in Queensland the total expenditure since 1923-1924 has more than trebled; in Austria it has about doubled in the same period; in Belgium the expenditure of the Emergency Fund (exclusive of family allowances for unemployed workers) has increased from 32 million francs in 1930 to approximately 365 millions in 1931; in Germany the total expenditure for compulsory insurance, emergency relief and communal relief taken together has risen from 1,151 million RM. in 1928 to 2,973 million RM. in 1931; in Great Britain the expenditure for compulsory insurance, already regarded as extraordinarily high

¹ Cf. Appendix I

(£51.5 million) in 1924-1925, approximately doubled (£101.3 million) by 1930-1931, and it is estimated by the Minister of Labour that the cost in 1932-1933 will be £120 million; in Italy since 1924-1925 the total expenditure on compulsory insurance is fully four times what it was (33.8 million lire in 1924, 23.1 million lire in 1925, 115.6 million lire in 1930); in the Netherlands, in the case of the voluntary unemployment insurance in operation there, expenditure has more than quadrupled during the last seven years; in Poland total expenditure on compulsory insurance has likewise more than quadrupled; in Switzerland the increase has been from 2.6 million francs in 1925 to 4.3 million francs in 1926 to 37.6 million francs in 1931¹. These figures take no account of the sums expended by local relief funds and private organisations².

These figures, incomplete as they are, are in themselves an eloquent testimony to the burden which the maintenance of this vast army of unemployed imposes on the various countries at the present time. It would be, no doubt, of great interest to attempt to measure the actual burden of unemployed maintenance on the national income of each country and to determine, e.g. how much the cost of unemployment represents of the national wages bill, and how much it represents of the national taxation. Unfortunately, very little material is available on which to answer such questions. Not only are, as pointed out above, the statistics of unemployment, and of unemployment costs, notoriously incomplete, but little information is available as to the amount of the national income and national wage-bill of different countries.

For two countries only, however, sufficient data are available to make approximate calculations possible. For Germany and the United Kingdom, the unemployment insurance schemes cover the

¹ For further details see INTERNATIONAL LABOUR OFFICE: *Unemployment Insurance and Various Forms of Relief for the Unemployed*; Geneva, Jan. 1933.

² In countries such as the United States, where organised provision for unemployment relief has not yet been developed, the burden has fallen in the main upon local funds. In New York City, for instance, the Executive Director of the Welfare Council has estimated that not less than \$75 million will be needed for relief in that city during the next twelve months, of which at least \$55 million will have to be provided by public funds. The Emergency Relief and Construction Act recently adopted by the United States Congress authorises loans up to \$300 million to States for unemployment relief, loans up to \$1,500 million for revenue-producing construction works of a public character, and an additional sum of \$322 million to be appropriated for Federal public works. Other relief appropriations—notably of \$40 million to the American National Red Cross—have also been found necessary. It is of interest to note that charitable contributions to relief in this country, large as they are in the aggregate, are estimated to amount to only 1 per cent. of the wage loss incurred by the workers.

great majority of the occupied population, and the figures of unemployment payments are comprehensive; moreover, for both these countries recent estimates are available of the national income and of the total amount paid in wages and salaries.

The national income of the United Kingdom has recently been estimated for 1931 at £3,332 million (excluding income from overseas) and the total paid in wages and small salaries at £1,709 million¹. Thus, the amount spent in unemployment benefits represents about 3.7 per cent. of the national measure and about 7.3 per cent. of the wages-bill. For Germany, the national income has been estimated for 1931 at 57,074 million RM., and the incomes of officials, salaried employees and wage earners at 33,055 million RM.² Thus, the amounts spent in unemployment benefits represent about 5.2 per cent. of the national income and about 9.0 per cent. of the earnings bill.

The strain thus imposed on State and municipal finances has come at a time when they are already seriously embarrassed by the rapid decline of the taxpayers' resources through loss of profits, depreciation of security values, shrinkage of interest payments and of all the usual sources of income. While the sums spent in unemployment relief have preserved a minimum of purchasing power in the hands of a large section of the consuming population, who would otherwise not have been able to buy at all, it is nevertheless unproductive expenditure leading to the creation of no fresh wealth. At the same time, while the relief given from public funds has saved the unemployed from complete destitution, it cannot save them from demoralisation, particularly in the case of the younger element, who find themselves launched into the industrial world with little or no prospect of learning a trade or putting their energy and initiative to any remunerative use. The immense outlay on unemployment relief, while absolutely indispensable, is nevertheless absolutely uneconomic. It does not help the unemployed to find productive occupation. It reduces the taxpayer's demand for goods and his ability to amass fresh capital, which might assist the revival of industry. Finally, by imposing a heavy charge on public finances, it saps confidence in their stability and thus further weakens the general financial position.

On financial grounds, therefore, the urgency of restoring the unemployed to productive activity is incontestable, and all the

¹ CLARK: *The National Income*. London, Macmillan and Co., 1932.

² *Statistisches Jahrbuch für das Deutsche Reich*, 1932, p. 526.

more so as, as is well known, by far the largest part of these taxes is paid by industry.

The urgency on economic grounds is scarcely less strong. The loss of wages represented by unemployment and under-employment¹ is a direct cause of the continual decline of prices. The inability of a quarter of the industrial community in any country to purchase its usual quantity of foodstuffs, clothing and other consumers' goods would inevitably be crippling both to the farmer and the industrialist. When such a state of affairs exists as it does now in many of the richest and most populous countries of the world simultaneously, a very serious situation is created. It is sufficient to illustrate it from the statistics of one of the largest and wealthiest countries, the United States. Statistics published by the Federal Reserve Board² show that the index of pay-rolls which, in June 1929 was 110, by June 1932 had fallen—chiefly by reason of unemployment and under-employment—to 43. The index of sales of department stores, still as high as 95 in June 1931, was down to 66 in June 1932. The index of stocks held by these stores—82 in June 1931—had likewise declined to 66 by June 1932. The index of the value of building permits awarded, which touched its peak of 139 in June 1928, had by June 1932 sunk to 27.

The connection between these figures is evident. The low pay-rolls are in large part responsible for the falling-off in the sales of department stores. The low volume of sales is accompanied by a more or less corresponding reduction of stocks. Orders to the manufacturers being thus doubly reduced, the amount of industrial building is low. The diminished pay-rolls in the building trade, thus brought about, result in further reductions in the sales of department stores; and so on, in the well-known "vicious spiral" of declining business activity.

§ 2. — Technological Unemployment

There is, however, another aspect of the problem. Although the major part of the prevailing unemployment is no doubt a result of the general business depression, it is equally certain that a considerable part of it is due to the great rapidity with which

¹ On the basis of figures published in the *International Labour Review* and referring to the end of 1931, it has been reckoned that the annual loss of wages of some 24 million wholly unemployed workers in a group of twenty countries must amount to about 105,000 million Swiss francs.

² Cf. *Federal Reserve Bulletin*, Aug. 1932.

labour has been displaced of late by technical improvements in industry and agriculture.

Exact information as to the rate of technical progress in recent years is not available, nor can precise comparisons be made with the rate of change characteristic of earlier periods. It is, however, generally considered that technical progress was unusually rapid during the post-war decade, and there is much to indicate that it has continued at a rapid pace even during the period of the depression.

These great changes would seem to be the result of the combined influence of a number of factors: the systematic application in industrial practice of scientific advances and the results of industrial research, which has been favoured by the fresh progress made in the concentration of industry; the more rapid extension of the use of power¹, more particularly electricity; improvements in the arrangement of workplaces; the growing use of machinery and automatic methods in production², accompanied by the spread of standardisation. All these processes affecting the material conditions of production have gone hand in hand with rationalisation in the use of the human element: vocational selection and training; more systematic organisation of the work by new technical methods such as work with conveyers, often linked up with appropriate automatic appliances; incentive systems of remuneration, etc.

In certain countries, data of a general character are available on this point³.

In Germany, from 1926 to 1929, the output per person employed rose by 33 per cent. in coal mines, 39 per cent. in lignite mines, 19 per cent. in iron ore mines, and 39 per cent. in potash mines. In the coal industry, during the same period, the increase was 16 per

¹ The power available per worker in Germany rose from 0.9 h.p. in 1907 to 2.8 h.p. in 1925; in the United States it rose from 3.23 in 1914 to 3.26 in 1919, and 4.65 h.p. in 1927. (*Statistisches Jahrbuch für das Deutsche Reich*, p. 89 (Berlin, 1930); *Statistical Abstract of the U.S.A.*, 1929.)

² A few examples taken from isolated industries reveal the progress in productivity, in certain cases, as a result of this process. In the glass industry, one Owens machine worked by 9 workers takes the place of 80 to 90 manual workers; it produces from 15,000 to 35,000 bottles in twenty-four hours. The output of a manual worker was 250 beer bottles in eight hours, whereas the Owens machine produces about 8,000 in the same time (report of the factory inspectors of Czechoslovakia, 1920). In the manufacture of electric light bulbs of 40 watts, the following differences in productivity have been noted: hand-production, index number, 100; semi-automatic machines, 215; automatic machines, 1,453, 2,433, 3,143, according to the type or model used. ("Productivity of Labour in the Glass Industry", in *Bulletin of the U.S. Bureau of Labour Statistics*, July 1927.)

³ Cf. Appendix II for the remarks on these various figures and particularly on their non-comparability from country to country.

cent. for lignite briquettes, 25 per cent. for hard coal briquettes, and 67 per cent. for coke. In the iron industry the figures rose by 51 per cent. for cast-iron and 50 per cent. for steel¹.

In Great Britain, the increase in productivity has been less marked. According to the Macmillan report², the output per person employed in the manufacturing industries from 1924 to 1929 increased by 8 per cent., in mines by 24 per cent., and in industrial production in general by 11 per cent.

In Sweden, the total output per industrial worker rose by 26 per cent. from 1923 to 1929³.

In the United States from 1919 to 1927, the output per person employed rose by 13 per cent. in transport work, 41 per cent. in mines and 43 per cent. in manufactures⁴. During the same period, the increase in productivity per man-hour was 55 per cent. over the whole of the iron and steel industry (139 per cent. for blast furnaces and 52 per cent. for steel works), 15 per cent. in the boot and shoe industry, 38 per cent. in leather tanning, 29 per cent. in slaughtering and meat packing, 88 per cent. in petroleum refining, 33 per cent. in the paper industry, 53 per cent. in cement manufacture, 97 per cent. in the automobile industry, 163 per cent. in the rubber tire industry, 67 per cent. in flour mills and 71 per cent. in cane sugar refining⁵.

In Canada, the output per person employed⁶ in the ten chief groups of industries rose by 17 per cent. from 1923 to 1929⁷. In Australia, from 1922-1923 to 1929-1930 the output per person employed⁶ in industries increased by 19 per cent.⁸ In New Zealand from 1925-1926 to 1929-1930 it increased⁶ by 15 per cent.⁹

While the general proposition that scientific progress ultimately creates as much employment as it destroys may be valid under theoretically ideal conditions of perfectly free markets and complete mobility of capital and labour, there is nothing either in economic theory or in recent experience to suggest that such a

¹ "Industrielle Produktion", Supplement to *Wirtschaft und Statistik*, 1931, No. 8.

² COMMITTEE ON FINANCE AND INDUSTRY: *Report*. London, 1931.

³ (SOCIALDEPARTEMENTET *Arbetslöshetsutredningens Betänkande 1. Arbetslöshetens omfattning, karaktär och orsaker*. Stockholm, 1931).

⁴ *Commerce Yearbook*, 1930, pp. 28-30.

⁵ *U.S. Monthly Labour Review*, March 1930.

⁶ Calculated according to the value produced, leaving out of account differences in price.

⁷ *The Canada Yearbook*, Ottawa.

⁸ *Summary of Australian Production Statistics, for the Years 1918-1919 to 1928-1929*. Canberra.

⁹ *New Zealand Official Yearbook*. Wellington.

proposition will hold under the conditions of the modern world¹. There is, moreover, strong reason *a priori*, when the rates of technical change and labour displacement are high, to expect that the time-lag between displacement and reabsorption will be substantial, if only for the reason that displaced workers cannot immediately be put in touch even with such opportunities for employment as may exist. While progress in the technique of production has been rapid, there has in most countries been no corresponding improvement in the rapidity with which displaced labour can find new jobs or migrate from one area to another in search of them. Man is still, of all baggage, the most difficult to transport, and so long as the occupational and geographical mobility of labour and the efficiency of its distribution among different avenues and places of employment are not improved at a rate corresponding to accelerated technical change, there is reason to expect the persistence of a higher volume of technological unemployment. There is, in fact, a real danger that if a revival of prosperity should again accelerate the rhythm of technical change the volume of unemployment due to this cause may not merely persist, but further increase².

It is not possible to assess the proportion of unemployment which at any given time can be attributed to technological change, as the information required for this purpose is not likely to be secured unless special enquiries are undertaken over a long period³. Various estimates based on such data as are available have, however, been made. In the case of Germany, for example, three different enquiries—Dr. Reithinger⁴, Mr. Wladimir Woytinsky and Professor Henri de Man⁵—have reached the conclusion that during recent years the number of unemployed in Germany whose unem-

¹ Cf. Alvin HANSEN: "Institutional Frictions and Technological Unemployment", in *Quarterly Journal of Economics*, Aug. 1931.

² It is of interest in this connection to note a recent striking statement by an American industrial engineer. According to Mr. Howard Scott, Director of Technocracy in the Columbia University School of Industrial Engineering, mechanisation of industry has reached a point "where only 55 per cent. of the workers thrown out of employment by the current depression can be re-employed if industry resumed operations at the 1929 peak" (*New York Times*, 21 Aug. 1932.)

³ Cf. the report of the United States Committee on Technological Unemployment (1931) in *Unemployment Insurance, Hearings before a Select Committee on Unemployment Insurance, United States Senate, Seventy-second Congress, First Session, pursuant to S. Res. 473 (71st Congress)*, pp. 545 et seq.; Washington, Govt. Printing Office, 1932.

⁴ *Vierteljahrshefte zur Konjunkturforschung*, Supplement 29. Berlin, Verlag Reimar Hobbing, 1932.

⁵ BANQUE NATIONALE DE BELGIQUE: *Bulletin d'information et de documentation*, Vol. II, No. 4, 25 Aug. 1932.

ployment was due to technological causes was in the neighbourhood of 1,000,000. Imperfect as such estimates must be, their approximate concordance is striking. With the mass of fragmentary evidence on the subject which has accumulated in the past few years—including the results of numerous enquiries into the numbers displaced in specific industries by the introduction of new methods—they suggest that technological unemployment has become a real factor in the present depression and must be reckoned with for a considerable time to come.

The increase in the productive capacity of industry consequent on the rapid rate of technical progress in recent years has raised in a more acute form than ever before, the question of what utilisation of the world's resources of time and materials is socially the most desirable. The total amount of goods and services necessary for the provision of a given standard of living may be produced now by fewer men than before or by the same number of men working for less time. With the same number working just as long, a much greater output of goods could be produced. This situation suggests a choice between two alternatives, either a maximum of material wealth or a larger share of leisure, or some combination of these two. Economists, engineers and industrialists seem agreed that the productivity of industry is fast increasing and is likely to continue its rapid evolution. If this be so, there is growing force in the contention that what the world most needs, in preparation for higher levels of material wealth, is a wider distribution of the leisure to cultivate the art of consumption and the art of intelligent living. In this view the shorter working week is not merely a measure made opportune by present extremity, but an essential element in any long-range social planning.

The development of opinion in favour of the shorter week is not confined to the labour movement and the ranks of economists and social philosophers. It is important to note that it is shared by leading industrialists in almost every country. A few characteristic expressions of this opinion may be quoted.

“Thanks to the use of machinery”, says Mr. R. Bosch, Director of the Robert Bosch undertakings, “man can now produce both luxuries and necessities much more quickly and with much less trouble than his ancestors could.” Mr. Lewis J. Brown, Director of the Kellogg Company in the United States, has also stated that there is a great excess of producing power. Mr. Agnelli, Chairman of the Fiat Company, points out that the increase in mechanisation

and rationalisation has meant an enormous development in production, both in industry and agriculture, whereas at the same time it has meant a gradual decline in the employment of manpower. The consequence is that a number of workers have been deprived of their means of earning a livelihood.

What should be done to restore the situation ? Must we condemn all technical progress ? “ Certainly not ”, Mr. Agnelli replies. “ No thinking man could suggest destroying the machines. . . . Technical improvements constitute one of the greatest victories of mankind. They are at the basis of modern progress and there can be no thought of doing away with them.”

In Mr. Bosch's opinion, there is no ground for asserting that important technical improvements can be held responsible for the present distressing situation. “ Technical progress ”, he says, “ is the result of the efforts of the human mind struggling against the external world. . . . To-day, when we have succeeded in harnessing the forces of nature, not merely in the struggle for existence but also to provide us abundantly with the joys of existence with the minimum of bodily labour, at this stage of evolution when, thanks to technical improvements, we are able to protect ourselves against hunger, cold, epidemics, etc., certain madmen are prepared to declare that technical progress has become the curse of humanity.”

There remains the other solution advocated by these industrialists, namely, the reduction of individual hours of work.

As Mr. Bosch puts it, “ we are thus compelled to reduce the normal length of the working day, particularly if our aim is to enable all persons capable of working to have an opportunity of doing so, and thus of earning a livelihood. In view of the present conditions of the labour market, no lengthy proof is needed of the fact that, with the existing means and methods of production, it will soon be impossible to find employment for everyone in any occupation unless we decide to lower the number of working hours per day. We may perhaps have to come to the six-hour day in place of the eight-hour day, which is at present the rule.”

“ Up to the present ”, Mr. Agnelli adds, “ technical progress—mechanisation and rationalisation—has aimed at producing the maximum amount with the minimum amount of labour, irrespective of the unemployment which would result. This aim must be changed to that of producing the maximum amount in the shortest possible time, while reducing the hours of work of each worker instead of reducing the number of workers. In other words,

technical progress must not be allowed to destroy the chances of employment." The most practical method, in the opinion of Mr. L. J. Brown, of dealing with the situation and leading to permanent adaptation to modern economic needs would be to reduce the hours of work from eight to six in the day.

Even before the present depression, a certain number of firms had reduced hours of work permanently on account of the technical progress which had been made. It was in 1926 that Mr. Ford surprised the world by deciding to reduce hours of work to forty, distributed over a five-day week, in his motor-car factories in Detroit. This measure applied to 250,000 workers employed in fifty different industries, and a short time afterwards it was extended to the staffs of his European factories in Manchester, Rotterdam, Antwerp and Berlin. As early as 1928 the Snow King Baking Powder Company introduced a working week of forty-seven and a half hours for its male workers, forty-five hours for women workers and forty hours for salaried employees. The United States Rubber Company, which employs 25,000 workers, obtained such satisfactory results with the five-day week that it has decided to keep to this as its normal permanent system.

In Czechoslovakia in 1930 Mr. Bata introduced the five-day week of forty-five hours for his 18,000 workers. In the following year he was employing 25,000 workers on this system, which now applies to about 60 per cent. of the workers in the Czechoslovak boot and shoe industry and to a certain number of chocolate and motor-car factories in that country.

§ 3. — Steps towards an International Reduction of Hours of Work

The unemployed can be reabsorbed in production by a number of means, many of which have been furthered or suggested by the International Labour Organisation.

At its session in January 1931, the Unemployment Committee of the Governing Body stressed the desirability of protecting the workers against the consequences of unemployment.

In accordance with the spirit of one item on its agenda, one of the tasks of the Financial and Economic Conference will certainly be to study possible means of achieving co-operation between the national economic systems, although the various States, far from adopting such a course, have one after the other enacted protectionist measures, which have been a contributory factor in the present crisis.

The International Labour Office has advocated another method which was mentioned by its Unemployment Committee. This is the plan for large-scale international public works, which would, directly or indirectly, provide employment for a considerable number of unemployed. In view of the large credits which would be required, these public works, as Albert Thomas very clearly showed, would act as a sort of "starter" to the process of recovery in our languishing economic system. The International Labour Office and the competent bodies of the League of Nations are still working together to determine the methods of giving effect to this plan.

The organisation of placing on an international scale, which is one of the measures advocated, would seem likely to increase, if only to a slight extent, the possibilities of procuring work. It should at least help to adapt the labour market to shorter working hours. A Technical Conference on Placing in Employment is to be convened by the Office.

In addition, the important question of unemployment insurance has been placed on the agenda of the next Session of the Conference.

It is in conjunction with all these efforts that the International Labour Organisation is now called upon to consider the possibility of reducing working hours.

Since the beginning of the depression, short time has been commonly practised and a certain number of spontaneous efforts have been made in the countries most severely affected by unemployment to engage extra workers. Such efforts, however, have been sporadic, and the methods adopted to prevent dismissal and to enable the unemployed to be reabsorbed have been varied and unreliable. Public opinion has now come to hope that it may be possible to obtain more tangible results if a more general and more systematic effort is made to reduce hours of work.

While it is true that unemployment as a whole is a problem which requires rapid solution, technological unemployment demands a very careful examination of the position in each industry so that appropriate measures can be taken. The action against cyclical unemployment must be a large-scale general movement; that against technological unemployment must, it would seem, be varied to meet different needs. Whether considered from the point of view of the economic depression or from the point of view of technological unemployment, the problem of hours of work is necessarily entering into a new phase. If the more urgent need is to be met, the question to be answered first is whether it would

not be wiser to take energetic steps to provide remunerative employment for a great number of the unemployed, thus restoring some of the purchasing power which has at present been lost, rather than to maintain them at the expense of the community for a period which may far exceed the duration of the present depression, especially when we remember the continuous elimination of workers as a result of technical progress.

But before allowing the possibility of a reduction in hours of work to raise such high hopes, it is only prudent to consider to what extent they are justified. Certain indications on this point will be collected in the following Chapter.

CHAPTER II

THE POSSIBILITY OF RE-EMPLOYMENT THROUGH A REDUCTION IN HOURS OF WORK

Any attempt to assess the extent to which a reduction of hours of work could lessen unemployment must take as its starting point the present situation as to hours actually worked, the main feature of which for present purposes is the increasing extent to which short time is practised. Simultaneously, overtime has also been reduced. It is accordingly proposed in this Chapter first to give such information as has been obtained as to short time and overtime, and then to attempt to draw some deductions from the facts as to the possibility of reducing the present large volume of unemployment through a shortening of working time.

The nature of the data available and the methods which have had to be used in the deductions made from them call for various observations and explanations. The extent to which a reduction in unemployment can be effected by a limitation of working time depends on a large number of social and economic factors¹ which cannot be statistically measured. Their influence is largely an unknown quantity, and there is thus no possibility of gauging accurately what would be likely to be the actual effect of a reduction in hours of work on the volume of employment. It accordingly becomes necessary, in endeavouring to obtain some idea of the possible extent of re-employment, to make a fundamental assumption in the treatment of the problem, the simplest and most straightforward one being that after a reduction in the working week the total number of man-hours worked would remain unaltered.

Even this hypothetical treatment suffers from lack of statistical material as to the actual number of man-hours worked. In order

¹ Such as, for instance, the repercussions of alterations in the volume of purchasing power and its use, and in the cost of production and sale price resulting from the introduction of a forty-hour week on the volume of employment, alterations in efficiency and the possible necessity for redistribution of labour between occupations and districts.

to arrive at such figures it would be necessary to have full data as to normal hours, the extent of short time and the extent of overtime, as well as to the numbers employed. But such data, or an approximation thereto, are available only for certain groups of workers who happen to be the object of periodical statistics or recent special enquiries in a few countries.

For the purpose of estimating the possibility of increasing employment in those groups, it will be assumed, wherever possible, that the man-hours worked in excess of forty or thirty-six per week would be re-distributed among newly engaged workers, so that the limitation of weekly hours of work—the total man-hours remaining unchanged—would only affect, at the start, those undertakings in which workers were employed for longer than the newly introduced limit.

It must, of course, be clearly understood that the conclusions reached by the use of this hypothesis will not give the actual number of persons who might in practice be re-engaged as a result of reducing hours of work. The assumption postulated, that the number of man-hours worked would remain unchanged, implies that the adoption of legislation limiting hours of work would not have any repercussions on the demand for the products of the undertakings affected, and that the employer would not, when engaging new workers, discount the probable increase in hourly output per worker, nor introduce new labour-saving machinery. It also implies that labour of a suitable type would be readily available when and where required, and that no technical or other obstacles would prevent this labour being set to work either through increasing the staff employed at any one time or by means of a rotation system.

It is not always possible, however, to ascertain the number of workers employed for more than forty or thirty-six hours in the week. In some cases the statistics obtained give only the average number of hours worked, and the deductions which have been made on this basis redistribute the total number of man-hours worked on the basis of a forty or a thirty-six-hour week. This method provides a figure below that which would be reached by redistributing only the man-hours worked over forty or thirty-six a week, as it implies that not only do those who work longer than this figure have their working time reduced, but that those working less have their hours prolonged.

In other cases the statistics available give only the proportion of workers on short time, without giving the actual hours worked

by them. Here again, the result does not reflect the assumption postulated as the figures do not take into account the possibility of redistributing the man-hours worked in excess of forty or thirty-six a week by those workers who are reported as not being in full-time employment. Further, it has been presumed in these cases that normal hours in regard to which short time is calculated are forty-eight in the week, even though the statistics may include as full-time workers some who are working less than forty-eight hours a week.

In still other cases the statistics give not only the number of workers working on short time, but also the approximate extent of the short time worked or the actual number of hours worked by them. In these cases, the deductions made correspond much more closely to the assumption stated.

§ 1. — Actual Hours of Work

THE EXTENT OF SHORT TIME

For the purpose of this report, information on short time should show not only the number of persons working less than the number of hours regarded as normal in their industry or country as the result of legislation, collective agreements or custom, but also the actual number of hours worked by them. In point of fact, the definitions of "short time" or "partially employed" used in the statistical returns vary from country to country, and seldom provide the actual number of hours worked.

The main sources of the statistics which have been examined are as follows:

(1) *Unemployment statistics* use definitions determined mainly by the principles on which benefits are granted and by other administrative considerations. Thus, the unemployment statistics for Belgium, Great Britain and Switzerland include, among those not regarded as unemployed, some workers who are presumably doing short time, and, among those regarded as "intermittent" unemployed, "temporarily stopped" or "partially" unemployed, many workers who are wholly idle but who have an understanding to the effect that they may return to their former employer after a certain time. The unemployment statistics for these countries have accordingly not been used. However, the figure for part-time employment among the members of the American Federation of

Labour is given, as in this connection "part time" is equivalent to "short time".

(2) *Employment statistics*, as a rule, cover a narrower field but are more detailed. They are available for France (undertakings employing more than 100 workers), Germany (trade union members), Great Britain (undertakings in certain industries), Italy (a large number of industrial establishments), Poland (transforming industries), United States of America (establishments covered by an enquiry of the National Industrial Conference Board). In some cases, the number of hours of short time or the approximate length of the working week is given. For the United States, an average figure per industry only is available.

(3) *Special enquiries* have recently been undertaken in a number of countries. Only those published in official journals and sufficiently wide in scope are referred to here. These enquiries apply to trade union members in Denmark and Estonia, to a number of associations of salaried employees and to workers in representative industrial undertakings in Germany, to the majority of industrial workers in Sweden, and to those employed in industries covered by an enquiry of the Bureau of Labour Statistics of the United States of America.

The data here in question are given below:

DENMARK

A special enquiry was carried out in July 1932 with a view to determining the importance and extent of short time. It showed that among the 314,000 workers, i.e. all organised workers in the country, short time is practised to a remarkably small extent. Only about 12,800 workers, or 5.7 per cent. of those employed, were working short time. The total number of hours thus lost amounted to about 200,000 per week, or about sixteen hours per worker on short time. If this is averaged over all the workers employed it amounts to less than an hour per week. It is noteworthy, however, that no less than 36 per cent. of those on short time were working half time or less.¹ (1.)

ESTONIA

A special enquiry covering about 24,000 workers, or over 80 per cent. of the workers engaged in medium-sized and large industrial establishments, gives for June 1932, by industries, the proportion of workers working a given approximate number of hours per month; 16.5 per cent. of those employed were working less than 175 hours a month (closest approximation to a forty-hour week) and 5.6 per cent. less than 150 hours a month (about equivalent to a thirty-six-hour week).

The percentage working less than 195 hours a month (about normal) was highest in the paper and textile industries (over 80 per cent. of those employed working less than normal time), the metal and wood industries (over 60 per cent.) and much less extensive in the hides and skins, printing and extractive industries (11-21 per cent.). (2.)

¹ The figures in brackets in the text of this Chapter refer to Appendix III, in which the statistical material referred to is set out.

FRANCE

Returns are sent in every month, by the Inspectors of Labour and of Mines, on the hours actually worked and the numbers employed in undertakings subject to their supervision and employing, roughly speaking, over 100 workers. The returns cover about 9,000 undertakings employing, on 1 October 1932, about 2,300,000 employees. Of these, 71.41 per cent. were working more than forty hours a week, 9.11 per cent. were working forty hours, and 19.48 per cent. less than forty hours.

It appears from these returns that practically all (over 99 per cent.) the workers in banking and insurance and in commercial undertakings, as well as unskilled labourers and builders, work more than forty hours. In the chemical, clothing, printing, road transport and food industries, a short working week is still exceptional (89 to 94 per cent. working for more than forty hours per week). In the stone-cutting, rubber and wood industries, short time appears to be more general (74 to 83 per cent. doing more than forty hours). Whereas in the engineering and metal trades, in the hides, skins and stone and brick industries, short time becomes a more important factor (64 to 72 per cent.). In the textile industry, we find only 63 per cent. of the workers doing more than forty hours per week and in mining areas only 32 per cent. (3.)

GERMANY

In Germany, the only available statistics on short time are those published by the General Federation of German Trade Unions giving for each industry the percentage of trade union members working short time and the general figure giving the approximate number of hours worked short of normal hours. The returns cover about 3,500,000 trade union members, of whom, on 24 September 1932, about 1,500,000 were unemployed. On this same date 40.3 per cent. of those employed were working short time to an estimated average extent of 13.7 hours each.

Short time was particularly serious in the boot and shoe, textile and clothing, metal and engineering, chemical and paper industries (52 to 62 per cent. of the trade union membership employed working short time). It was prevalent among the food producers, the leather industry and in mines (36 to 46 per cent. of the employed trade union members). In the printing trades about 27 to 36 per cent. of the membership employed were on short time and in wood and glass works, as well as transport undertakings, about 26 to 31 per cent. Among general factory workers (not included in the above groups) short time was not very prevalent, only 9 per cent. of the trade union members employed being affected by it. In the building and other seasonal industries there was, at the date mentioned, practically no short time, in spite of 75 per cent. of trade union members being unemployed. (4.)

Further, a special enquiry has been undertaken by the Federal Statistical Office in the course of the last three years in a number of factories concerning the wages paid and hours worked. Though no separate indications are given as to the number of workers employed for any given number of hours, the average number of hours worked for each worker per week is given. This amounts to 44.8 in the confectionery industry (March 1931), 44.29 in the chemical industry (June 1931), 44 in the paper industry (May 1930), 42.23 in the textile industry (September 1930), 41.46 in the iron and steel industry (October 1931), 40.1 in the wood (building timber and furniture) industry (March 1931) and 39.27 in the electrical industry (October 1931). It is probable that the extent of short time will have increased since these enquiries were undertaken. (5.)

A special enquiry was undertaken in June 1932 into the short time worked among the members of a certain number of associations of salaried employees consisting largely of office workers and technicians. The number covered was about 170,000 employed in some 3,500 undertakings. Of these, some 1,500 undertakings occupying over 72,000 salaried employees were working short time, about 80 per cent. of those employed in these undertakings being on short time (i.e. 33.7 per cent. of all the salaried employees covered by the enquiry); 26 per cent. were working from one to eight hours short and 7.7 per cent. more than eight hours short. (6.)

GREAT BRITAIN

Data on short time are lacking in Great Britain. The number of "temporary stoppages" reported in the unemployment returns cannot be taken to be representative of short time, as they include workers who are laid off by an establishment with a prospect of re-employment, as well as workers working three days a week or less. On the other hand, it will not include workers whose short time does not enable them to qualify for unemployment benefit, i.e. those who are not unemployed three days a week.

The annual report of the Chief Inspector of Factories for 1931¹ states that "the normal week of forty-seven and forty-eight hours was general, except in cases where, owing to the depression, short time was inevitable". This would seem to imply that at any rate in 1931, short time was not very generally practised.

The *Ministry of Labour Gazette* publishes data based on the returns sent in by a number of employers in various industries. These cover a few industries only, and then only a part of the undertakings engaged in them.

From these returns it is clear that the number of hours worked in coal mines averaged over the total number of wage earners on colliery books at 24 September 1932 was under forty or even thirty-six, coal being got from the mines on an average of only 4.26 days per week or 31.9 hours (about 34.1 if both winding times be included). In the textile industry the information provided by employers' returns refers to 15.5 per cent. of the workers employed in the cotton industry and 70.1 per cent. of the workers employed in the woollen and worsted industry. In the cotton industry in July 1932 15 per cent. of the workers covered by the returns were working short time to an average extent of seventeen hours a week each, and in the woollen industry in September 35 per cent. of the workers were on short time to an extent of thirteen hours a week. In the worsted industry 24 per cent. of the workers worked short to the extent of thirteen hours each, while in the carpet section of the woollen industry 13 per cent. were working short to an extent of thirteen hours each. On the assumption that the normal hours of work, with respect to which short time is given, are forty-eight in the week as provided for in the collective agreements in force in 1931, the average hours reported, taking into account short time but not overtime, are considerably over forty in the week: 45.45 in the cotton industry, 43.45 in the woollen industry and 44.88 in the worsted industry.

In the boot and shoe industry returns were received from undertakings employing 51.4 per cent. of all the workers in that industry, and 46 per cent. of them were working short time to an average extent of ten and a half hours a week. The average working week was thus 43.17 hours.

In the pottery industry, in which returns covered 16.9 per cent. of the workers employed, the hours of work, which are normally forty-seven in the week for most workers averaged in September 41.31, 45.5 per cent. of the workers being on short time to an average extent of twelve and a half hours.

The only other industry on which data are provided is the brick industry, where returns referred to undertakings employing 12.2 per cent. of those employed in the industry. They show that 16 per cent. of the workers were on short time to an average extent of fifteen hours each, which makes the average working week 45.6 hours. (7)

ITALY

Monthly returns are published giving for one week in every month, in respect of about 6,500 undertakings employing in August 1932 about 630,000, the number of workers working a normal week, the number working more than a normal week and the number working less than a normal week². The actual number of hours worked, however, is not given. The returns appear to cover the great majority of undertakings employing more than 10 workers in the various branches of industry to which they apply.

¹ Cmd. 4098, p. 50.

² The number partially unemployed is published in the *International Labour Review* and is reproduced in Appendix I.

In the week from 22 to 27 August, 1932, 7.7 per cent. of the workers employed were working more than a normal week, 63.6 per cent. were working a normal week and 29.8 were working less than a normal week. Short time is particularly extensive in the textile industry: cotton, wool, linen and silk weaving (30 to 57 per cent. of the workers employed being on short time) with the exception, however, of the silk spinning industry (3.6 per cent. only); fairly prevalent in the clothing (22 to 24 per cent.); paper about 30 per cent., iron, steel and engineering industries (29 to 37 per cent.), but much less so in the automobile industry (about 16 per cent.); shipbuilding (5.7 per cent.); construction of railway material (about 15 per cent.); and the cement industry (about 13 per cent.). (8.)

POLAND

Data are published quarterly giving week by week the average number of hours per week actually worked in the "transforming industries", i.e. manufactures; these figures apply in June to about 300,000 workers and show an average working week of 41.5 hours. 65.6 per cent of the workers employed in these industries were working six or seven days a week, 23.8 per cent. four or five days a week and 10.6 per cent. from one to three days a week; so that the average working week consisted of 5.32 days.

In the industries working up mineral products, in particular building materials and glass works and in the chemical industry the average hours are relatively high (44.1 to 45.4 per week); in the building, wood, paper and printing industries, short time is more prevalent (average hours 42.5 to 43.2 per week); but it is in the food trades and in the metal and textile industries that hours are shortest (39.3 to 40.4 per week). (9.)

SWEDEN

An enquiry was carried out in March 1932 covering some 1,900 undertakings in industry and mining, employing about 240,000 workers. The results show that the average hours of work were forty-five per week. The scope of the enquiry covers the majority of industrial workers. The industries which were working almost full time (forty-six to forty-eight hours a week) include the food industries, textiles, paper and printing and the chemical industry (except the match industry) and power stations. Those in which short time was prevalent (forty to forty-six hours a week) include the iron and steel industries (see below for iron ore mining), coal mining, peat extraction, porcelain, glass, leather and cement industries and match factories. Hours were particularly low (below forty) in iron ore mining, quarries, and in the boot and shoe industry. This latter group employs only 7.3 per cent. of the workers covered. (10.)

UNITED STATES OF AMERICA

Each month the Bureau of Labour Statistics collects data by correspondence regarding employment and pay rolls in a large number of establishments in the United States. Data were also on one occasion obtained from a number of reporting firms on the man-hours worked by all employees in May 1932. Some 25,000 establishments employing 2,500,000 employees replied to the questionnaire on this subject. They showed an average working week of 41.1 working hours including manufacturing and non-manufacturing groups. In the manufacturing industries only, the average working week was 37.3 hours. In undertakings producing cotton goods the hours of work are slightly above the average for all manufacturing industries (39.9 hours), the automobile industry and sawmills, and boot and shoe factories work about the average (36 to 37.5 hours) whereas iron and steel works show a particularly low working time (26.3 hours). In the non-manufacturing group particularly long hours are worked in the production of crude petroleum (52.5 hours a week), but no other industrial group has an average working week of more than forty-eight hours, except electrical railroad and motor-bus operation and hotels. The extractive industries show relatively low hours per week (below forty), and trade, both wholesale and retail, and power and light production relatively high (forty-four to forty-eight). If the proportion of workers working less than forty hours be considered it will be found to be particularly high. In

the manufacturing industries, for instance, 67.6 per cent. of the workers employed work forty hours or less and 49.7 per cent. thirty-six hours or less. In the non-manufacturing industries (certain categories excluded) 61.5 per cent. were working forty hours or less and 27.2 per cent. thirty-six hours a week or less. The disparity in the number of hours worked in particular undertakings compared with the average for the industrial groups is very striking. An important number of workers are doing much more than forty hours a week in spite of a relatively low average of working hours per week. (11.)

The National Industrial Conference Board have also regularly collected statistics as to the average hours worked per wage earner in twenty-one manufacturing industries. In September, the average was 34.8 hours per week.

The only industries which were working relatively long hours were the meat packing industries (48.8 hours per week) and the cotton and silk industry 47.2 hours per week; the boot and shoe industry was working 44.5 hours on the average. Short time was more prevalent in the leather, chemical and wool industries and in the manufacture of paper products (41 to 43 hours per week); the engineering and metal industries, however, show much shorter hours (on the average 24.9 to 32.5), the automobile industry, in particular, reporting the lowest average working week (24.2 hours) of all the industries mentioned. (12.)

The American Federation of Labour reports show that in September 1932 32 per cent. of those employed, i.e. 22 per cent. of their members, were working part time¹. This percentage amounted to 50 in the metal trades and in the printing trades and to 43 in the building trades. The data cover some 700,000 workers. (13.)

No doubt, the statistical material set out above does not give a clear or complete picture of the extent and prevalence of short time, and simply provides illustrations of it which are not comparable one with another owing mainly to the different methods on which the statistics are compiled.

It will be seen that the proportion of workers employed who are on short time varies considerably from country to country, but that this practice appears to be fairly extensive in all the countries covered, with the exception of Denmark.

It will be seen, too, that the prevalence of short time also varies considerably from industry to industry. Subject to a number of exceptions, it would appear that the textile industry is most frequently to be found amongst those in which short time is worked to the greatest extent, and that, as a general rule, the metal trades and the engineering and electrical industries also work a relatively low number of hours. On the other hand, in clerical employment (banking, insurance, etc.), hours appear to be maintained at a level about normal in the great majority of cases. In the building trades also, although unemployment may be very great in certain countries, short time does not seem to be much worked.

It has been alleged that short time was so extensive that a

¹ This series is given regularly in the *International Labour Review* and is reproduced in Appendix I.

reduction in hours of work would produce only a slight decrease in unemployment. In the light of the data given in the preceding pages, this would appear to be an exaggeration. As a matter of fact, the figures given show that in all countries, with the possible exception of the United States, at least half of the workers in respect of whom statistics exist, and in many cases a very much larger proportion, are being employed for considerably more than forty hours a week. Indeed, though thousands may be unemployed in the same district and in the same occupation, a majority of those employed are still working full time and some are even working overtime, as will be seen below.

EXTENT OF OVERTIME

In most industrial countries, factory inspectors have been given instructions to endeavour to cut down the use of overtime to a minimum during the depression. At the same time, there are only a few countries for which it is possible, on the basis of statistics of the amount of overtime actually worked or of the number of permits granted, to form an estimate of the effects which such intervention has produced.

Administrative Measures for Reducing or Abolishing Overtime

In a number of countries which have legislation on the eight-hour day, the administrative authorities have been asked to authorise overtime only in cases of absolute necessity, and to encourage employers who have to cope with rushes of work to engage additional hands rather than extend normal working hours.

Moreover, in one country the law provides that in times of unemployment overtime may be prohibited for a specified period in the whole or a part of industry, while in another country overtime in public offices has been forbidden by order of the Government for the duration of the depression.

AUSTRIA

The Government has asked the factory inspectors and the employers' organisations to avoid overtime whenever possible. Early this year a committee was appointed to consider means of alleviating unemployment; at present it is studying the possibility of abolishing the exceptions to the eight-hour day which are permitted by law in a number of industries including sugar refineries, malt works, lime works, cement works, quarries, etc.

CZECHOSLOVAKIA

The Minister of Social Welfare has on several occasions expressed his determination to reduce overtime, and has given definite instructions on the matter to the factory inspectors.

ESTONIA

The Act of 10 June 1931 on hours of work provides that in order to reduce unemployment the Government may prohibit overtime during a certain period for industry as a whole or for a given branch of industry. So far as the Office is aware, no use has so far been made of this provision.

FRANCE

On 11 March 1932 the Minister of Labour drew the attention of the divisional labour inspectors to the resolution on unemployment which was adopted by the Governing Body of the International Labour Office at the beginning of this year. In a Circular Letter the Minister pointed out that a number of the recommendations contained in the resolution coincided with the instructions issued by him at various times, and notably on 21 March 1931. The Minister recommended that, even though the use of overtime was not conditional on authorisation by the labour inspectors, the latter could ask employers' organisations not to make use of their allowance of overtime during the depression but rather to engage extra hands: the inspectors were entitled to investigate in every case whether the exceptions to normal working hours were justified and to take action against any abuses.

The Minister of Labour having specially asked that the amount of overtime allowed to make up for lost time should be kept within narrow limits, the divisional labour inspectors of the Paris district and of the departments of the Nord, Pas-de-Calais and the Somme have succeeded in withholding for 1932 permission to prolong the working day by one hour in the building trades.

GERMANY

In 1930, the Government of the Reich sent a Circular to the different States requesting that the factory inspectors, in conjunction with the employment offices, should study the possibility of replacing overtime by the engagement of new workers. The States accordingly asked the competent authorities to authorise overtime only for short periods and when it was really justified. At the beginning of 1931 a Committee of Experts was set up by the Federal Government to consider the question of unemployment. The Committee expressed the opinion that overtime could not be prohibited absolutely, because it often met a real need, but that the number of hours authorised might be reduced. Further, it proposed that overtime should be reduced as far as possible in all branches of the Government service, that sufficient time should be allowed for the execution of orders by Government departments and that it should be stipulated in the contracts that overtime was to be avoided. In view of the recommendations of the Committee, the Government published on 5 June 1931 a Legislative Decree which lays down that overtime provided for by collective agreements may be performed only with the approval of the competent authorities.

The factory inspectors, desirous of restricting overtime to absolutely necessary cases, point out in their report for 1930 that the amount of overtime performed by manual workers and salaried employees had been considerably reduced. According to provisional information for 1931, this tendency has been more pronounced, largely owing to the economic depression.

ITALY

In accordance with a recommendation of the National Council, the Minister of Corporations in August 1932 instructed factory inspectors to restrict overtime to the minimum necessary for the requirements of production. Before granting exceptions to the normal working day as established by law, the competent authorities must make certain that it is not possible to satisfy economic requirements by engaging new workers from among the unemployed. In every case account must be taken of the number of unemployed persons in the trade in question who could be employed on the work for which the exception is demanded.

By an Order of 25 November 1931, the Head of the Government himself set the example by forbidding Ministries, provincial or local administrations,

and other departments under State control, to work overtime or permit their workers to be employed on Sundays or public holidays.

POLAND

A Committee composed of representatives of the economic and trade union organisations has been instructed by the Prime Minister to investigate the unemployment question. This committee has suggested that the first thing to be done to increase the number of persons in employment was to cut down overtime. Orders have consequently been given to the factory inspectors to authorise overtime only in exceptional cases and when it is impossible to find trained workers in the ranks of the unemployed. According to the report of the Minister of Labour on the work of the Ministry during 1931, the efforts of the inspectors to reduce overtime have met with considerable success, and a number of instructions and Decrees are being prepared to help them in their task.

RUMANIA

Similar directions have been given to the factory inspectors in Rumania, who have been asked to see that certain classes of workers are not required to work for considerably more than normal hours while other workers in the same trade are out of a job.

SWITZERLAND

Since the beginning of the depression the Department of Public Economy has endeavoured to restrict the number of exceptions allowed under the Factory Act to the normal working week. Definite orders on the subject have been issued to the factory inspectors.

Although the measures noted above refer only to a few countries, no doubt other Governments which have authority to do so have in one way or another requested the administrative authorities concerned to endeavour to reduce overtime to a minimum.

Statistics of Overtime

So far as the Office is aware, statistics of overtime are published only in four countries, and even then the figures do not always enable an estimate to be made of the extent to which overtime has been curtailed. Moreover, reductions which have taken place may be due not only to pressure exerted on manufacturers by the factory inspectorate, but also to the unfavourable economic situation. It is impossible to assess the relative importance of these two factors.

BELGIUM

Since 1925 statistics have been kept on overtime. The following table is based on the number of permits issued under section 7 of the Eight-Hour Day Act¹:

¹ MINISTRY OF INDUSTRY, LABOUR AND SOCIAL WELFARE: *Revue du travail*; see also the annual reports submitted in accordance with Article 408 concerning the working of the Convention on hours of work in industrial establishments.

Year	Number of permits issued	Number of workers covered	Total amount of overtime sanctioned (in hours)
1925	396	24,107	2,123,517
1926	426	20,184	1,671,363
1927	699	32,174	2,574,267
1928	1,180	43,457	3,515,285
1929	1,159	49,412	4,108,417
1930	611	27,129	2,370,160
1931 ¹	258	8,628	802,128
1931-1932 ²	167	5,837	391,154

¹ From 1 January to 1 November 1931.

² From 1 October 1931 to 30 September 1932.

This table shows that permits were most numerous in 1928, that the number was approximately the same in 1929 and that since then it has been considerably decreased, so that during 1931-1932 it amounted to only 14 per cent. of the number issued in 1928. As regards the number of workers employed on overtime, the peak was reached in 1929 and was followed by a sharp fall in 1930, 1931 and 1932.

It is possible to calculate the average amount of overtime worked per worker during the course of the year by comparing the number of workers affected with the total amount of overtime authorised. From 1925 to 1930, this number remained between 80 and 88; it rose to the unusual level of 93 in 1931 (first ten months), falling to 67 hours in 1931-1932. This last figure tends to show that it has been possible to restrict the number of hours worked overtime per worker.

The statistics of overtime authorised in the different industries show that the figures for 1930 and 1931 have fallen considerably in comparison with 1929. In 1929 the figure was 4,108,417; in 1930, 3,270,160; in 1931, 802,128 (for the first ten months); and in 1931-1932, 391,154. The following table shows the considerable extent to which reduction of overtime has taken place in certain industries ¹:

Industry	1929	1930	1931 ¹	1931-1932 ²
Building	68,818	464,117 ³	26,232	429
Woodworking, furnishing	555,014	112,882	23,670	10,577
Food and drink	354,836	144,424	20,523	16,992
Textile	665,562	337,445	344,077	191,041
Metal	1,302,818	492,752	87,112	29,825
Clothing	266,421	172,038	23,686	6,953
Art and precision	31,031	15,818	2,134	418
Printing	41,357	171,119	12,316	7,750
Skins and hides	129,532	129,438	32,992	17,595
Tobacco	41,332	127,126	41,068	1,580
Chemical	177,488	41,849	42,520	13,630
Paper	129,715	34,185	27,939	7,560
Special industries	124,256	79,123	103,167	77,156
Pottery	170,711	33,912	4,864	4,656
Quarrying	—	7,035	1,242	2,128
Glass	13,638	4,428	5,384	3,008
Transport	25,888	2,469	3,192	456

¹ The figures cover only the first ten months.

² From 1 October 1931 to 30 September 1932.

³ This increase is probably due to the large building operations undertaken during the course of the year in several important towns.

CZECHOSLOVAKIA

For this country the statistics are most complete and are given in the following table :

OVERTIME IN CZECHOSLOVAKIA FROM 1921 TO 1931 ¹

Year	Number of permits granted	Number of undertakings affected	Number of workers		Total amount of overtime		Amount of overtime worked per worker in hours (per year)
			Employed	Who worked overtime	In hours	In days of 8 hrs.	
1921	1,337	1,260	215,588	77,599	3,061,111	382,639	39
1922	906	1,234	142,914	40,428	1,934,949	241,869	48
1923	1,597	1,566	290,299	79,606	3,273,645	409,206	41
1924	3,544	3,551	712,087	217,838	10,757,828	1,345,978	49
1925	4,163	3,872	812,457	244,775	14,505,292	1,813,162	59
1926	3,346	3,626	610,043	177,877	9,276,046	1,159,506	52
1927	5,098	5,351	990,552	328,658	17,787,426	2,223,428	54
1928	5,591	6,040	1,037,456	298,127	15,331,331	1,916,416	51
1929	5,503	5,483	1,083,085	287,248	16,277,873	2,034,734	57
1930	2,015	2,559	523,548	116,205	5,972,752	746,594	51
1931	1,607	1,811	330,447	90,219	4,280,736	535,092	47

¹ Report of the National Statistical Office of the Czechoslovak Republic.

As in other countries, the number of permits granted to work overtime has fallen greatly—by about two-thirds—since 1929, while the number of workers affected has decreased from 287,248 in 1929 to 116,265 in 1930 and 90,219 in 1931. The total amount of overtime worked, which was 16,277,873 hours in 1929, 5,972,752 hours in 1930 and 4,280,736 hours in 1931, has thus also fallen during the same period by about 75 per cent., while in comparison with 1929 the total number of workers employed on overtime decreased by 59.5 per cent. in 1930 and 73.7 per cent. in 1931. The amount of overtime worked per worker has been reduced from fifty-seven hours in 1929 to fifty-one in 1930 and to forty-seven in 1931.

The fall in the amount of overtime worked was greatest in the industries most severely affected by unemployment: in the textile industry, the decrease was 77.4 per cent. in 1931 as compared with 1929, in the stone and glass industry it was 82.9 per cent., in the metal industry 73.5 per cent., and in the engineering trades 87.6 per cent. On the other hand, in the industries producing consumption goods, which have been less affected by unemployment, the fall in overtime figures is smaller: 33.4 per cent. in 1931 for the food and drink trades, as compared with 1929, and 58.2 per cent. in the building industries.

The figures published for the first eight months of 1932 show that the fall has been even more rapid. The total amount of overtime authorised during that period was only 469,398 hours as compared with 2,299,458 hours in 1931.

NETHERLANDS

Attention is drawn to the figures given in Appendix III (14), which show the number of undertakings which received permits to prolong hours of work and the duration of such prolongations, varying from one to fifteen days to six months and more. The statistics show that the number of undertakings receiving permits to work overtime increased continuously from 1923 to 1929. In 1930 their number fell by about 12 per cent. and in 1931 by about 23 per cent. in comparison with 1929. The figures also show that the permits granted for the shorter periods (one to fifteen days, from fifteen days to one month, and from one to three months) have been considerably curtailed, while those granted for more than three months and up to six months and more have fallen but slightly.

SWITZERLAND

Reports of the factory inspectors for the years 1930 and 1931 show that prolongations of normal working hours authorised under sections 40 and 41 of the Factory Act of 17 June 1919 had been considerably reduced in comparison with the preceding year. The Act makes a distinction between overtime worked beyond the normal forty-eight-hour week (section 40) and overtime worked beyond an extension of the normal working week to fifty-two hours (section 41). The statistics contain information for all the extra hours of work above forty-eight hours a week, as may be seen from the following table:

Year	Number of factories on 31 December	Number of workers	Total number of undertakings which received permits to work overtime	Total amount of overtime in hours (days × workers × hours)
1924	8,234 (8,103) ¹	357,507	1,273	1,991,009
1925	8,258 (8,152) ¹	364,247	1,215	2,040,038
1926	8,211 (8,128) ¹	354,997	1,210	1,815,786
1927	8,244 (8,169) ¹	366,896	1,544	3,243,946
1928	8,337 (8,259) ¹	393,016	1,656	3,581,618
1929	8,500 (8,374) ¹	409,651	1,723	3,694,346
1930 ²	9,492 (8,406)	392,232	1,579	2,884,498
1931 ²	8,477 (8,374) ¹	363,190	1,485	2,036,087

¹ The totals in this column are higher than the actual figures (indicated in parenthesis) because a number of undertakings are included in several groups of industry at the same time.

² In the column "Number of factories on 31 December", read from 1930 onward "Undertakings subject to the Act".

The peak was reached in 1929, and from then onward the total number of hours of extra work has fallen sharply. It has been reduced from 3,694,346 in 1929 to 2,884,498 in 1930 and to 2,036,087 in 1931. No information is however given in these statistics as to the number of workers employed on overtime.

It will thus be seen that overtime has diminished considerably during the last three years in the countries for which information has been obtained. Nevertheless, it has not been possible to abolish it entirely. In point of fact, overtime is frequently worked for technical reasons, e.g. for urgent repairs to machinery following an accident or other unforeseen occurrence. It may also be necessary when an employer has an order on which he has enough work to prolong working hours for some of his hands but not enough to warrant his taking on new workers, in view of the diversity of the qualifications required. The statistics show that whereas

the total volume of overtime has considerably diminished because fewer workers have been employed on overtime, the average amount of overtime worked per worker has remained substantially the same in Czechoslovakia, and has not been much reduced in Belgium.

§ 2. --- The Possibilities of Re-Employment

On the basis of the examples which have been given of the extent to which short time and overtime are practised, it remains to endeavour to draw such deductions as are possible as to the theoretical extent of re-employment which might be produced by a forty or thirty-six hour week.

So far as overtime is concerned, the preceding sections show that even the complete elimination of all overtime worked in the few countries providing statistics on the subject would not lead to any great reduction in unemployment. The efforts which Governments are making through their factory inspectorates to prevent abuse of overtime, in cases where new workers might be engaged instead, have no doubt produced good results by preventing unemployment to a certain extent. But it would appear that a certain minimum number of hours of overtime is almost inevitable. As, moreover, this minimum cannot be ascertained from the statistical data available, it is impossible to estimate how many workers could be re-engaged by scaling down overtime to such a minimum. The question is, however, of comparatively minor importance, as may be seen by the following examples. If all the overtime reported in 1931 in Czechoslovakia were re-distributed over newly-engaged workers, it would provide employment, on the basis of a forty-hour week, for only 2,064 men, or 0.6 per cent. of the workers covered by the statistics. In Belgium, overtime reported from 10 October 1931 to 30 September 1932 would give work for only 188 men on the same basis. On the other hand, it may well be that a more substantial reduction of unemployment might be effected in countries where no steps have yet been taken to limit overtime and for which no statistics are available.

So far as concerns short time, it has already been observed that the statistics available on this subject are very limited, and that the deductions to be made from them are to be based upon the assumption that the total number of man-hours of employment would remain unchanged after the shortening of the working week.

All the same, it is possible, on this assumption, to draw from the data on short time which have been given for a number of countries in the preceding pages certain rough estimates as to the possibilities of re-employment which might be opened up in these countries by the introduction of a forty (thirty-six) hour week as the normal regime. An attempt to formulate these deductions is made below.

It should simply be recalled, in presenting these deductions, that short time is to be clearly distinguished from a regular and uniform limitation of the working week on the lines contemplated in this report. No doubt, the practice of short time, due to a falling-off in demand, has already considerably reduced hours of work for many workers. This reduction, however, has been haphazard and has not led to the engagement of any new workers: indeed, it is at best an alternative to the total unemployment of a larger or smaller group of workers in the same undertaking. On the other hand, the main object of a regular and uniform limitation of working time, applicable to undertakings generally, is to enable workers already out of employment to be taken on again. With short time, moreover, the plant is usually run for a shorter period, whereas a regular regime of shorter hours would not prejudice the length of time during which the plant may be run.

Subject to these observations, the deductions formulated, always of course on the assumption recalled above, as to possibilities of re-employment in the countries already referred to are classified below according to the nature of the statistics on which they are based: (1) deductions based on average working hours; (2) deductions based on the proportion of workers working short time; and (3) deductions based on figures giving both the number of workers on short time and some indication of the hours worked by them. This classification is then followed by a summary of certain comprehensive estimates for Germany which have been made by a few bodies or authorities in that country.

Deductions Based on Average Working Hours

In *Germany*, it would appear from the special enquiries undertaken into hours of work in various industries (5) at different periods from 1929 to 1931 that, on the basis of average hours, the number of workers employed could be increased through the introduction of a 40 (36)¹ hour week to the extent of 12 (24.44) per cent. in the confectionery industry, 10.72 (23.03) per cent.

¹ Figures given in italics for the rest of this section refer to a thirty-six-hour week.

in the chemical industry, 10 (22.22) per cent. in the paper industry, 5.57 (17.31) per cent. in the textile industry, 3.65 (15.17) per cent. in the iron and steel industry, 0.25 (11.39) per cent. in the wood (furniture and musical instruments) industry. In the electrical industry, average hours are below 40, but a 36-hour week would provide re-employment to the extent of 9.08 per cent.

In *Sweden* also, only average hours are given by industries (10). They cover almost all the industrial workers of the country and apply to 15 March 1932. The industrial groups covered by the enquiry in which the average working time was less than 40 (36) hours per week employ only 7.3 (2.8) per cent. of the workers covered. A redistribution of the man-hours worked by workers in industrial groups in which the average hours of work exceed 40 (36) per week would, on the basis of a working week thus reduced, permit the re-engagement of some 32,000 (61,000) workers or 14.4 (26.2) per cent. of those actually employed therein.

In the *United States*, on the basis of the reports of average hours worked in 21 manufacturing industries, prepared by the National Industrial Conference Board (12), the 40-(36) hour week would in September 1932 have enabled 22 (36.7) per cent. more workers to be taken on in the meat packing industry, 18 (31.1) per cent. in the silk and cotton industries; 11.2 (23.6) per cent. in the boot and shoe industries; from 5 to 7 (16.7 to 18.9) per cent. in the wool, chemical, painting and varnishing, and leather industries; 3.7 (15.3) per cent. in the paper products industries; 2.5 (13.9) in the newsprinting industry and 2 (13.3) per cent. in the hosiery and food industries. No other of the industrial groups covered work average hours above 40, but the introduction of a 36-hour week would also permit 10.3 per cent. more workers to be re-engaged in the paper and pulp industry, 6.4 per cent. in lumber and millwork, 4.7 per cent. in the furniture industry, and 4.2 per cent. in book and job printing. In all other industries, including all the heavy and engineering industries, automobile production, and rubber, hours are below 36 on the average.

Deductions Based on the Proportion of Workers on Short Time

In *Italy*, according to returns (8) covering a large proportion of all industrial workers other than those engaged in small establishments, i.e. in August 1932 some 630,000 workers, 71.3 per cent. of those employed, were working a normal week or more than a normal week. If their hours were reduced by the proportions contemplated, about 88,000 (147,000) workers could be re-engaged or 14.0 (23.4) per cent. of those actually in employment.

In the *United States*, among the members of the American Federation of Labour covered by the returns (13) of this association (about 700,000 workers), though 32 per cent. were unemployed in September 1932, 68 per cent. of those employed were working full time. If those fully employed had their hours reduced by $16\frac{2}{3}$ (25) per cent., a number corresponding to 15.6 (22.7) per cent. of those in employment could be re-engaged.

Deductions Based on Figures Giving Both the Number of Workers on Short Time and Some Indication of the Hours Worked by Them

In *Denmark*, a special enquiry undertaken by the trade unions covering the great majority of industrial workers gives, for 20 July 1932, in addition to the proportion working short time, an indication of the extent of the short time worked (1). If the hours worked by those in employment in excess of 40 (36) hours a week were redistributed (assuming a 6×8 -hour day week to be normal), a number corresponding to 18.9 (31.7) per cent. of those in employment could be re-employed.

In *Estonia*, a similar enquiry of an official character (2) undertaken in June 1932 covering about 80 per cent. of the workers in large and medium-sized industrial establishments showed that 56.2 per cent. of the workers covered were working less than 195 hours a month. A limitation of hours

Comprehensive Estimates.

The *Institut für Konjunkturforschung*, in August 1930, after having taken into account as much as possible short time then being worked, estimated that the reduction in unemployment which a forty-hour week would render possible would be less than 1,500,000 out of 2,350,000 workers unemployed at this period. (15.)

The Committee of Experts on Unemployment set up by the Government in 1931 quotes an estimate of the Federal Institution for Employment Exchanges and Unemployment Insurance referring to the month of October 1930, according to which about 1,000,000 workers could find employment. Their estimate covers industrial undertakings and workers engaged in handicrafts, mining and building, excluding undertakings employing less than ten workers. (16.)

The General Federation of German Trade Unions estimated in October 1931 that the re-employment which would be possible through the suppression of overtime and the introduction of a forty-hour week in industry, railways and post offices would be at least 800,000. Due allowance was made for workers engaged in small undertakings, for those working short time and for the increased output per head. At this time unemployment was about 4,600,000. (17.)

An enquiry carried out by Dr. Jacoby, of Berlin, and referring to the month of March 1932, drew the conclusion that some 500,000 workers could regain employment through the introduction of a forty-hour week in industry. He made due allowance for exceptional cases in which it might not be possible to apply the forty-hour week, and for short time then being worked. At that time 40.4 per cent. of the trade union members employed were working short time to an estimated average extent of 14.4 hours a week, whereas there were about 6,000,000 unemployed registered. (18.)

The conclusions reached by the four enquiries summarised above are not comparable in that they cover different categories of workers and were carried out at different dates. The difference in the conclusions reached depends, however, to a large extent on the increase in short time worked between the dates to which the estimates refer (ie August 1930 and March 1932).

It is recognised that the data obtained on hours actually worked are so incomplete as to render it impossible to obtain for any particular country an accurate general view of the extent of the reduction in unemployment which a limitation of hours to forty or thirty-six in the week might render possible. It is also recognised that any comparison between the deductions made as to the proportionate increases which might take place in the different countries in the numbers of persons employed would not be justified in view of the different methods used for compiling the statistics obtained and also in drawing deductions from them. All the same, the estimates which have been attempted serve as useful illustrations of what might be the *immediate* effect of a legal limitation of hours of work, supposing a given number of man-hours worked.

Theoretically, a reduction of hours of work from forty-eight to forty (*thirty-six*) would render re-employment possible to the extent of 20 ($33\frac{1}{3}$) per cent. of the workers working full time, and some smaller percentage in the case of workers on short time who are

working more than the proposed maximum. As the statistics on short time show that in every country except the United States and Estonia more than half the workers covered by the statistics are working normal hours, the conclusion may be drawn that the number of those in employment, whether on full or short time, could be increased by *at least* 10 (16.7) per cent., and in most cases considerably more, by a limitation of working time to forty (*thirty-six*) hours in the week.

In some countries, as will be seen from the preceding pages, the possibilities of reducing unemployment through a shortening of working hours are greater than in others. In a few countries, such as the United States, Germany, Poland and Estonia, where short time is particularly prevalent, the reduction in unemployment would be relatively small, and in these countries it would be the later effects of shorter hours which would be the most important.

When a business revival takes place and increased orders accrue to the producers, the limitation of hours of work would then serve a socially useful purpose in so far as it prevented undertakings at present working less than the proposed maximum hours of work from meeting the extra demand by keeping the same number of men in employment and increasing their hours to, say, forty-eight a week, or even more. If this development were not prevented, the result would be that even in the event of a very considerable measure of economic revival there would still be a very large army of unemployed. As a matter of fact, in view of the great economies of labour effected by the introduction of machinery and by rationalisation in its various forms, it might well be that millions would remain unemployed even during a period of prosperity.

Assume, for example, that the volume of buying increased to a point at which the demand could be satisfied by the total number of workers *at present in employment* (whether on full or short time) working forty-eight hours a week. Such a situation, after all, would represent only a moderate degree of economic revival, and yet it would imply, with hours at forty-eight a week in undertakings generally, that the present high level of total unemployment would still persist. Suppose, however, that in the meantime hours of work had been limited to forty (*thirty-six*) in the week; then the theoretical maximum of re-employment referred to above, 20 ($33\frac{1}{3}$) per cent. of the workers in undertakings coming within the scope of the limitation, would be attained.

In fact, in so far as this re-employment took place, there would

be good reason for expecting an extra demand for labour. The increased purchasing power in the hands of the workers who had returned to employment would, in itself, create a further large demand for goods and enable yet more workers to be engaged. The process would thus tend to be cumulative. As against this tendency, of course, it is probable that the new level of production could be maintained with a smaller labour force. The problem of technological unemployment will continue to face the world. There is ample evidence that the displacement of labour is likely to continue. Even the generalisation of methods of production already applied in the more efficient undertakings would lead to a very large displacement of labour, and there is no reason to suppose that new labour-saving devices will not be adopted. This renders an adaptation to the present disequilibrium all the more urgent.

SOME PRACTICAL CONSIDERATIONS

A shortening of the working week cannot, however, be regarded as an isolated phenomenon. It seems clear that the actual application of any legislation on this subject would raise certain practical issues to which attention would have to be given. These questions have always arisen whenever hours of work have been reduced, but hitherto they have not presented any insuperable obstacles. They have caused considerable discussion in the past, and it is not necessary to go into them at any length in this report. In particular, it is not proposed here to examine those which refer to general economic issues, such as the repercussions of a system of shorter hours of work on wages, cost of production and purchasing power, but only to refer to some of them which, to the extent to which they may represent real difficulties, might tend to limit the number of persons who would find employment. The main points of this nature are: a possible lack of factory space and plant; a possible shortage of suitable labour when and where required; and a possible insufficiency of housing.

The difficulty as to *lack of factory space and plant* for the newly engaged workers could probably be met in most cases by the introduction of any one of the numerous varieties of rotation or shift systems described in the next Chapter, which enable the plant to be worked longer than any individual worker. The great degree of flexibility which the use of such systems permits should render them applicable to most types of industrial and commercial establishments.

The possibility of a *shortage of labour* is scarcely a question which has any urgency in this period of depression, as it would appear from available statistics ¹ that the number of unemployed constitutes a reserve amply sufficient to meet all requirements of the present volume of production in industry and commerce in almost all countries on the basis of a forty-hour week. Moreover, when and if production increases, involving a demand for a larger labour supply, the very high level of unemployment in most industrial countries is sufficient evidence that it will be possible to meet the demand.

But even though a general shortage of labour is unlikely to arise, it may happen that there may be shortages of certain types of labour or of labour in certain places. As a rule, this question should not present any great difficulty. In the majority of cases, the introduction of the forty-hour week would probably do no more than lead to the re-engagement of workers who were formerly in employment, if not in the same undertaking at any rate in similar undertakings in the same locality. It is improbable that a very large proportion of these workers will have abandoned either their profession or their district during the period of depression which has occurred since they left their employment, i.e. at a time when the opportunities for a change of occupation or district cannot have been very attractive. In such cases the result would simply be a return to the situation existing before the depression, but with lower hours of work. No doubt the period of unemployment may have caused some of them to lose their skill, but such loss of skill can usually be made good in a relatively short time of steady employment. The possibilities of the geographical distribution of unemployment within a country being such that, with a forty-hour week, factories established in areas in which there is but little unemployment might not be able to find the supply of labour required to meet their orders, is a question which calls for consideration. Where this arises, all measures which would assist the flow of labour from other parts of the country to such an area until hours have been reduced to the legal limit should be encouraged. Facilities of this kind available on a limited scale, such as the paying of fares of workers who have obtained work in another district, together with the co-operation they necessitate between employment exchanges, already form a part of the regular technique of placing in a number of countries.

¹ See Appendix I, in which the recent figures for unemployment are given.

The more general question of the inter-occupational mobility of labour may present considerable difficulties in the short period, but in many industries it is much less important than formerly. The simplification of individual tasks, consequent on the general use of automatic machinery, has reduced the proportion of jobs requiring a complex and slowly acquired skill, and has increased the proportion requiring the more rapidly acquired and less specialised skill of the machine operative. The latter type of worker quickly acquires sufficient aptitude to render him fitted for employment in industries producing a great diversity of commodities, and is thus better able to move from one trade to another. In so far as a reduction of hours tends to become permanent, the solution seems to be to encourage this tendency by training the younger workers to be generally efficient and adaptable so as to enable them to be employed in a semi-skilled capacity in the manufacture of various types of products, according to the rapid change in demand which is likely to be a feature of the future. Having satisfied his simpler and more elementary needs, the consumer is likely to spend any surplus he may have left according to taste and fashion, thus creating a very fickle demand, mainly for industrial products. This requires as a counterpart an industrial organisation which can adapt itself rapidly to such changes and labour capable of similar adaptation.

The possibility of an *insufficiency of housing facilities* for newly engaged workers has also been raised. As already suggested, this question would not arise until the workers formerly unemployed and still living in the locality had all been re-engaged. In so far as it becomes a permanent problem and new housing is proved to be necessary, the State should, wherever possible, empower and urge local authorities to carry out the task of providing the housing facilities required, or undertake the work directly. In the report already published by the International Labour Office on housing policy in Europe¹, information as to housing schemes which have already been carried out is given, and constructive suggestions are made.

In conclusion, the available statistics tend to show that, at any rate for the workers covered by them and if the number of man-hours worked remains constant, the immediate effect of a

¹ INTERNATIONAL LABOUR OFFICE: *Housing Policy in Europe: Cheap Home Building*. Studies and Reports, Series G (Housing and Welfare), No. 3. Geneva, 1930. VIII + 378 pp.

reduction of hours to forty (*thirty-six*) in the week would in theory be an increase in numbers employed of at least 10 (16.7) per cent., and in most cases more, in all but one or two countries, even though this figure would not be reached in all industrial branches.

As for the actual reduction in unemployment which might be expected, agreement may be expressed with the conclusions published in 1931 by the Committee of Experts on Unemployment appointed by the German Government. This Committee went into the question in all its aspects, and although it considered it impossible to estimate even approximately the numbers which might find employment through a reduction in the hours of work, it expressed its conviction that the enormous army of the unemployed could be considerably reduced by such a method ¹.

When economic revival has got under way, the effect of a legal limitation of hours would be to prevent increased production taking place only through the lengthening of the working time of those workers who at present are on short time, and consequently, not reducing as much as might be possible the present volume of unemployment. The limitation of hours would, in other words, ensure that when economic revival sets in, the great majority of the unemployed would be rapidly restored to work.

¹ *Gutachten zur Arbeitslosenfrage*, Part I, 1931. Published as supplement to the *Reichsarbeitsblatt*, p. 5.

CHAPTER III

METHODS OF REDUCING HOURS OF WORK

§ 1. --- Possible Methods

The theoretical problem is as follows: given that an undertaking requires at a specified time and in specified technical conditions a certain number of man-hours of work for its production or working, how can these hours be spread over the largest number of workers on the basis of shorter hours of work than those hitherto normally observed? The question is in fact one of reducing the number of hours of each worker over a given period and of assigning the surplus so obtained to additional workers.

Before considering the methods of achieving this end, a few preliminary remarks are called for concerning the number of workplaces or machines available in an undertaking in relation to the number of workers to be employed and the working period of the undertaking.

NUMBER OF WORKPLACES OR MACHINES AVAILABLE IN AN UNDERTAKING IN RELATION TO THE NUMBER OF WORKERS TO BE EMPLOYED

Undertakings or departments of undertakings exist where the number of workplaces is for various reasons strictly limited. In a building-yard, for instance, the number of bricklayers building a wall cannot be increased beyond a certain figure. Similarly, the shift working a set of rolls in a rolling-mill, or charging or tapping a blast furnace, or working at the face in a mine cannot be made larger. Again, in a metal-turning shop or a cloth factory, the only way of employing at any time a number of workers larger than that strictly determined by the number of lathes or looms is to increase the number of these machines.

There are undertakings, therefore, where the number of workers who can be employed *simultaneously* cannot exceed a maximum,

determined either by the number of workplaces or by the number of machines. To the objection that all that is needed is to enlarge the premises and increase the equipment, it will be sufficient to answer that such measures entail considerable expenditure (purchase of land and machinery, construction, equipment, additional taxation), without leading to a corresponding increase in production.

In the present circumstances, however, it should be remembered that before the economic depression the undertakings acquired premises and machinery on a scale sufficient, and even more than sufficient, to meet the demand then prevailing. Since then their production has fallen, and many undertakings would find no difficulty in giving simultaneous employment to a larger number of workers in view of the fact that now some of their machines are not working or they have vacant workplaces. On the other hand, although a cloth factory may work a few more looms by reducing the working period of the rest, such extensive plant as a blast furnace or a set of rolls cannot be set going by reducing the working period or daily output of those already in operation, the aggregate production remaining unchanged. It follows that there are still undertakings where the number of workers who can be employed simultaneously cannot be increased. At the same time there are certainly processes to which this limitation does not apply, and in which the number of workers occupied simultaneously might be very considerably increased, as, for instance, in road making and in the painting of large metal structures, bridges, etc.

WORKING PERIOD OF THE UNDERTAKING

The working period of an undertaking—that is to say, the period during which work is done—is in normal conditions fixed at a certain number of hours per day, or of days per week or other specified period.

In undertakings with continuous processes, the working period cannot be touched, since they necessarily work day and night without interruption. In the rest, the working period may in many cases be reduced by a certain number of hours per day or days per week in a specified period, without affecting the volume of production, provided that the number of workers is increased.

In some undertakings such a reduction is impossible and they are bound to maintain their working period. This is the case, for instance, when production is closely connected with the output and speed of working of machines, so that, if it is to remain

unchanged, the machines must work for a specified number of hours per day and days per week or month. It is also the case for commercial undertakings which must remain open for a sufficient number of hours to satisfy customers' demands.

Finally, although this case is less frequent, there are undertakings capable of increasing their daily or weekly working period, while still observing the restrictions under the regulations in force concerning, for instance, the hours of opening and closing or the weekly rest.

With due allowance for the remarks made above with regard to the number of workplaces or of machines and to the working period of the undertaking, there appear to be two sets of methods of reducing hours of work in such a way as to increase the number of jobs:

- (a) methods allowing of the simultaneous employment of more workers than those ordinarily employed;
- (b) methods allowing of the employment in rotation, or by shifts, of more workers than those who can be employed simultaneously.

Whatever the method adopted according to the conditions or circumstances, the result is the same, the aggregate of the hours of work set free by each worker allows of the engagement of additional staff.

Methods Allowing of the Simultaneous Employment of More Workers

These methods can be adopted in undertakings where the working period may be reduced, without technical or economic inconvenience, by a certain number of hours per day, or where the working itself can be held up for a certain number of days during a specified period; if the level of production is to be maintained this would necessitate the engagement of additional staff. For instance, the six¹- or seven²-hour day may be substituted for the eight-hour day, bringing the working week to thirty-six or forty-two hours, in addition to which hours may be further reduced on Saturdays. Or again, the working week of six days may be changed for one of five³ days, or the fortnight of twelve days for one of

¹ Cf. p. 91.

² Cf. p. 87.

³ Cf. pp. 81, 82, 83, 86, 87, 89 and 93.

eleven days, the working day remaining eight hours, and the length of the working week becoming forty hours or, in the second case, averaging forty-four hours. A shorter working week may be obtained by combining the reduction of the working day with the reduction of the number of days of work. Thus, a fortnight of eleven working days of seven hours gives a weekly average of thirty-eight and a half hours. The days on which the working of the undertaking is held up, instead of being taken separately at the rate of one per week or per fortnight, may be grouped, for instance, at the rate of two consecutive days per fortnight¹ or four consecutive days or even a week per month.

In all these cases the working day of each worker and the number of days he works remain respectively the same as the daily working period of the undertaking and the number of days it works, but the total number of workers occupied is increased.

Methods Allowing of the Employment in Rotation, or by Shifts, of More Workers

From the point of view of the undertaking, these methods mean that it has a larger number of workers than can be employed simultaneously and that the proportion of the staff needed for the work is employed in rotation or by shifts.

A system of rotation by which the working of the undertaking can be maintained may relate to individuals or to groups. If, in a workshop normally employing five turners, each worker in rotation is required to take a day off, it will be possible to employ an additional turner, who similarly takes one day off per week; the distribution of the work for the five jobs among the six workers A, B, C, D, E, F (F being the sixth worker engaged), during the week will be as follows:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A	A	A	A	A	F
B	B	B	B	F	B
C	C	C	F	C	C
D	D	F	D	D	D
E	F	E	E	E	E

Instead of giving one day off per week, two consecutive days may be given per fortnight, in which case the distribution of the work among the six workers will be as follows:

¹ Cf. p. 91 for similar example.

FIRST WEEK

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A	A	A	A	A	A
B	B	B	B	B	B
C	C	C	C	C	C
D	D	D	D	F	F
E	E	F	F	E	E

SECOND WEEK

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A	A	A	A	F	F
B	B	F	F	B	B
F	F	C	C	C	C
D	D	D	D	D	D
E	E	E	E	E	E

In both cases, although neither the working of the undertaking nor its equipment has been changed, the working week for the workers has been reduced to forty hours, and thus an additional worker has been employed ¹.

A system of rotation may even be introduced without requiring the additional worker to be able to replace any one of the rest. It is sufficient that each of the workers, including the additional worker, is able to replace one other. The following table shows how, in a service comprising seven jobs in the hands of seven workers, A, B, C, D, E, F, G, including a foreman A, a system of rotation may be introduced by which an additional worker, X, can be employed.

The details are as follows:

Jobs	1	2	3	4	5	6	7
Holders	A	B	C	D	E	F	G
Substitutes	B	C	D	E	F	G	X

The table of rotation is as follows (each week one job is in the hands of two workers, one working in the morning, the other in the afternoon: in the first week, job 1; in the second week, job 3; in the third week, job 5; in the fourth week, job 7):

Jobs	1	2	3	4	5	6	7
First week	A B	C	D	E	F	G	X
Second week	A	B	C D	E	F	G	X
Third week	A	B	C	D	E F	G	X
Fourth week	A	B	C	D	E	F	G X

With a working-day of eight hours, the average working week of each worker will be forty-four hours.

¹ Cf. p. 88 for similar example.

What is possible for a single worker is also possible for groups of workers. The staff of an undertaking, or of a department of an undertaking, may be increased by one-fifth of the necessary staff and divided into six groups, five of which will be employed in rotation, so that in a period of six consecutive weeks each will have been laid off for one week. The hours of each group, that is to say of each worker, will be 240 per six weeks, or an average of forty per week.

The system of rotation may even cover longer periods, months instead of weeks. This is true of the so-called Krümper system which, as will be shown below, has been adopted fairly widely in Germany¹. Under this system the worker is laid off for considerable periods².

The workers' holidays with pay may also be used for organising the system of rotation. If the holidays are taken between May and October, for instance, it is possible to engage during this period other workers to take the place of those on holiday. In order to occupy this additional labour during the remaining seven months of the year it is only necessary to organise another system of rotation with a corresponding reduction in the hours of work. The institution of a paid holiday of two weeks to be taken in rotation between May and October releases twelve working days per worker over a period of five months. This can be followed by the organisation of a system of rotation between October and May whereby each worker gives up one working day per fortnight, thus releasing fifteen working days per worker over a period of seven months. During the first period one additional person could be permanently employed for every nine workers, each working roughly nine out of ten fortnightly periods; during the second period one additional person could also be permanently employed for every eleven workers, each working eleven out of twelve working days. In this way permanent employment over the whole of the year could be created for approximately the same number of additional workers³. It may be added that a system of rotation based on the normal holidays with pay can be used simultaneously with any other system of reducing hours of work, since it consists in essence in replacing during his absence the worker on holiday whose daily or weekly hours of work may already have been reduced.

Under these various rotation systems, the working day of

¹ Cf. pp. 85 and 94.

² Cf. p. 94.

³ Cf. p. 88.

each worker corresponds as a rule to the daily working period of the undertaking, but the number of days worked by each worker is smaller than the number of days worked by the undertaking.

An increase of staff by the *formation of shifts* or an *increase in the number of existing shifts* may be effected in two ways.

The hours of work of all the workers—or of the shifts if the work is already organised in shifts—may be reduced and the surplus hours so obtained may be spread over other workers, who form a second, third or fourth shift working after the first, second or third shift. If the working of the undertaking is not continuous, the creation of a second or third shift necessarily involves an increase in the working period.

A system of two eight-hour shifts may be replaced by one of three six-hour shifts, each of which has a smaller staff, although the total staff is larger than before. Instead of employing two shifts of ninety workers during eight hours each, three shifts of eighty workers can be employed during six hours each. The number of workers will have risen from 180 to 240 and the working period of the undertaking from sixteen to eighteen hours.

If the working of the undertaking is continuous and the work is done by three successive eight-hour shifts, it is possible by reducing the length of each shift by two hours to introduce a fourth shift of six hours¹. The total number of workers will be increased by the size of one shift. If the shift consists of ten workers, the total will rise from thirty to forty.

When the work is already organised in shifts, it is also possible to increase the number of shifts without changing the length of each. It is sufficient for this to form a new shift which will share with the rest the number of weekly spells². An undertaking in which the work is organised in two eight-hour shifts, i.e. twelve spells per week, may form a third eight-hour shift, which will work four spells, replacing the two original shifts in turn; each shift will thus work thirty-two hours per week.

During each week the spells may be divided as follows between the three shifts A, B and C (C being the new shift):

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A B	A C	B C	A B	A C	B C

¹ Cf. pp. 79, 80, 81, 84 and 85.

² Cf. pp. 84 and 85.

If the work is continuous and organised in three eight-hour shifts, the distribution of the spells between these shifts A, B and C and the new shift D will be as follows:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
First week	A B C	A B D	A D C	D B C	A B C	A B C
Second week	A D C	D B C	A B C	A B D	A D C	D B C

During each fortnight each shift will thus work nine eight-hour spells, or an average of thirty-six hours per week.

If work is also done on Sundays, the distribution will be as follows:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
First week	A B C	A B D	A D C	D B C	A B C	A B D	A D C
Second week	D B C	A B C	A B D	A D C	D B C	A B C	A B D
Third week	A D C	D B C	A B C	A B D	A D C	D B C	A B C
Fourth week	A B D	A D C	D B C	A B C	A B D	A D C	D B C

During each period of four weeks each shift will thus work twenty-one eight-hour spells, or an average of forty-two hours per week¹.

It will appear from the above that a *reduction of individual hours of work* intended as a means of increasing employment may be obtained according to circumstances by one of the following methods:

- a reduction of the number of hours worked per day (leading to an increase in the number of shifts worked during the twenty-four hours in the case of work organised in shifts, or possibly to the creation of a second shift);
- a reduction of the number of individual spells of work during a specified period, resulting either from the simple suppression of spells by a reduction of the working period of the undertaking, or from the introduction of a rotation system if the working period of the undertakings cannot be reduced (rotation between a larger number of shifts than the number of daily spells in the case of work organised in shifts).

¹ The above tables do not show the change-over from one shift to another, but only which shifts are occupied on each day. If the system of change-over is organised, the respective positions of the shifts, in the last table for instance, would be as follows:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
First week	A B C	D A B	C D A	B C D	A B C	D A B	C D A
Second week	B C D	A B C	D A B	C D A	B C D	A B C	D A B
Third week	C D A	B C D	A B C	D A B	C D A	B C D	A B C
Fourth week	D A B	C D A	B C D	A B C	D A B	C D A	B C D

All the systems of reduction considered above tend, in the form described, to equalise the hours of all the workers employed. A large variety of combinations could be obtained in each case, if it is intended to have some new workers working shorter hours than the rest. For instance, three workers, A, B, C, normally employed six days in the week, may take it in turns to give three working days per week to a fourth worker D. During each period of three weeks workers A, B and C will work two six-day weeks and one three-day week, or an average of five days per week, and worker D will work three days per week.

By these methods it is theoretically possible to distribute the whole of the work among all the workers, but in practice it should be pointed out that if the distribution is to be possible for a particular operation, this operation must be on such a scale that a reasonable reduction of each worker's share will set free sufficient work for the employment of one or more additional workers during an equally reasonable period.

§ 2. — Choice of Method according to Nature of the Work

The question may be asked which of these methods of reducing hours will meet the special needs of various industrial or commercial undertakings. In reply a distinction may be made according as the work is continuous or not. The following three groups will be considered:

- (a) continuous work during the whole week including Sundays, or during the six weekdays with a suspension on Sundays;
- (b) discontinuous work performed by two shifts;
- (c) discontinuous work performed by only one shift.

CONTINUOUS WORK

This kind of work calls for the continuous presence of a shift consisting of a specified number of persons. The number of workers forming the shift, that is to say the number of workers simultaneously employed, cannot for technical and economic reasons be increased. But, as shown above, it is possible by reducing the hours of each shift to increase the number of shifts worked per day.

As the composition of each shift necessarily remains unchanged, the result will be an increase in the total number of workers employed by the undertaking.

Thus, for continuous work carried on during the whole week including Sundays, the system ordinarily adopted—which was moreover mentioned in Article 4 of the Washington Convention—is to employ three shifts for seven eight-hour spells each week, giving a working week of fifty-six hours for each worker. The work could be divided among four shifts working seven six-hour spells, giving a working week of forty-two hours for each worker. In this way a fourth shift can be introduced in the daily rotation.

Work carried on continuously on the six weekdays and suspended for twenty-four hours on Sundays is usually done by three eight-hour shifts, giving a forty-eight-hour week for each worker. The work can be done by four six-hour shifts, which would mean a working week of thirty-six hours for each worker.

Similar results can be obtained for each of the two types of work by leaving the hours of each shift unchanged, i.e. eight hours, and employing a larger number of shifts on a rotation system. Thus for work that is continuous throughout the week and performed by three eight-hour shifts, an additional shift may be formed, and the length of each shift left untouched by laying off the shifts in turn day by day. As the week consists of twenty-one eight-hour spells, the twenty-one spells may be divided among four shifts, three of which work five spells, and the fourth six. To equalise the hours of each shift, it will be sufficient to continue the rotation during four weeks, as will appear from one of the tables above. Each shift will thus work an average of forty-two hours per week.

For this kind of work an intermediate method is possible, which consists in organising auxiliary or relay shifts, with a view to securing the weekly rest in rotation. During each period of three weeks the three normal shifts work an average of forty-eight hours per week instead of fifty-six, and the relay shift works twenty-four hours.

The succession of the regular shifts A, B and C, and the relay shift R, might be as follows:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
First week	A B C	A B R	A B C	A B C	A B C	R A C	C R B
Second week	C A B	C A R	C A B	C A B	C A B	R C A	B R A
Third week	B C A	B C R	B C A	B C A	B C A	R B C	A R C

DISCONTINUOUS WORK PERFORMED BY TWO SHIFTS

In some industries working two shifts both shifts do the same work, as for instance, in the textile industry; in others they do different work, as for instance, in mines with a hewing shift and a maintenance shift. It should be noted that where a mine has two hewing shifts and one maintenance shift working during the twenty-four hours, it belongs to the first group, so far as the two hewing shifts are concerned.

Undertakings in which the two shifts do different work and the workers cannot be transferred from one kind of job to the other may be classed, so far as each of the shifts is concerned, as normally working one shift. For the rest, the point to consider is whether or not they make use of all their machines and workplaces.

If they have no more machines and workplaces available, or cannot or will not increase their number, it is possible, as in the case of industries with continuous processes, to reduce the hours of each worker, with a view to engaging additional workers, either by reducing the hours of each shift and forming an additional shift with shorter hours, for instance, two six-hour shifts and one four-hour shift instead of two eight-hour shifts—the workers' individual hours may be equalised by a rotation system—or by keeping the two eight-hour shifts and forming an additional shift working in rotation with the two normal shifts, each doing thirty-two hours of work per week instead of forty-eight. In both cases the number of workers employed simultaneously and the working period of the undertaking remain unchanged.

Another possible method is to change both the working period of the undertaking and the number of workers employed simultaneously. The working period of the undertaking may be raised, for instance, from sixteen to eighteen hours, and the work may be given to three six-hour shifts, employing a larger number of workers than the former two eight-hour shifts. The normal output of sixty-three weaving looms worked by two shifts during sixteen hours per day, can be obtained from fifty-six looms worked by three six-hour shifts during eighteen hours per day. In the first case the undertaking employs 126 workers; in the second, 168.

If these undertakings have any machines not working, or any vacant workplaces, they can reduce the hours of each of the two shifts and increase the number of workers in the shift. In the last example given the same output can be obtained from seventy-

two looms worked by two shifts during fourteen hours per day, the total number of workers being 144.

DISCONTINUOUS WORK PERFORMED BY ONE SHIFT

Where the working period of the undertaking can be prolonged, it is possible to organise the work in shifts, for instance, two shifts, each with shorter hours and together employing a larger total number of workers than the former one shift.

If the working period of the undertaking can be reduced, and if the maximum number of workers who can be employed simultaneously is not reached, or if there is no such maximum, recourse can be had either to a reduction of the daily working period, while maintaining the normal number of working days, or to a reduction of the number of days worked in the week, fortnight, month, etc., while maintaining or reducing the daily working period.

Finally, if the working period of the undertaking cannot be reduced or increased, recourse may be had, as in fact it is in all other cases, to a rotation system, by which the hours of each worker may be reduced without affecting the other conditions of work.

§ 3. — Practicability of the Different Methods

It has been shown that every undertaking, whatever its method of organising the work, its working period and the number of its workplaces or machines, is able to use one or other of the methods of reducing hours of work described above, with a view to creating employment. It is for the management of the undertaking to decide, with due reference to all technical and economic considerations, and in particular the effect on output and overhead expenses, and perhaps also with reference to local considerations, which method will give the best results. As a matter of fact, even in the same undertaking the method may vary with circumstances. So far the methods considered have been based on the assumption of unchanged production. In practice, however, this assumption is rarely fulfilled. Apart from small fluctuations due to the haphazard distribution of orders, and from more important seasonal fluctuations which can be provided for, production varies on a larger scale with the general economic situation. Whenever there is a change in production, the factors of the problem will change too, but the methods of solving it remain the same. The only

question that arises is whether the increase or decrease in the volume of production should lead to a change in the methods of reducing hours for others more suited to the new needs. The choice of a particular method cannot be considered final, therefore, for it may be to the advantage of the undertaking to change it in order to meet new circumstances. This would appear to be the dominating motive of the movement in the United States for rendering the working day and week more flexible, so that hours of work could be adapted to the needs of production without delay.

Among these methods of reducing hours of work, some deserve special attention as specially suitable for practical application, while others are of little more than theoretical interest. In several cases the facts are in themselves sufficient to show which methods have been preferred.

For continuous processes, the method that has found most support is that of substituting four six-hour shifts for three eight-hour shifts. It has in general been preferred to that of maintaining the eight-hour spells and using four or more shifts in rotation, even though this method entails only three changes of shift in the twenty-four hours instead of the four needed when each spell is reduced to six hours. The introduction of this system of four six-hour shifts was advocated for sugar factories in Poland in October 1931 by the Superior Unemployment Committee, and it is at present in force in many undertakings in Europe and the United States.

For undertakings normally working two shifts, the system of compensating the individual reduction of hours by the organisation of a third shift and the substitution of three six-hour shifts for two eight-hour shifts does not appear to be adopted in practice owing to the relatively low level of production. Once there is a revival of business, however, this method offers genuine advantages from the point of view of the engagement of additional labour. No doubt it increases the social disadvantages inherent in the shift system, which has been much criticised, but these disadvantages, serious though they are, would be largely compensated by the satisfactory results from the point of view of employment.

In undertakings working with only one shift no cases are known of the organisation of a second shift, both shifts working reduced hours. In these undertakings the methods preferred, which are chosen to meet the particular conditions of each, consist on the one hand of the introduction of a working week of five eight-hour

days, or forty hours in all, and the daily reduction of hours, both of which tend to reduce the working period of the undertaking, and on the other, of the organisation of a rotation system enabling the undertaking to maintain its normal working period. The latter method is in fact equivalent to establishing an individual working week of forty hours if the rotation takes effect within the week, or an average individual working week of forty hours if it takes effect over a period longer than a week, and to basing the calculation of hours on the number of spells of a specified length worked during a specified period.

Among the systems of rotation in use, there is one that has become fairly prevalent in Germany, where its establishment has even been encouraged by the authorities. This is the Krümper system, which, as stated above, consists in having at the disposal of the undertaking a larger staff than actually needed, and in suspending a specified proportion, one-quarter to one-tenth, in rotation for a period of a week to a month. While the workers are laid off they receive unemployment benefit at a reduced rate. The granting of the benefit is made conditional on the existence of an agreement between the employer and the workers' representative body (works council, workers' council, or salaried employees' council), offering adequate guarantees that the rotation system will be properly applied. Since workers' representative bodies exist only in undertakings employing as a rule at least twenty workers, there is no question of encouraging the Krümper system in smaller undertakings at the expense of the unemployment insurance funds. The decision whether unemployment benefit shall be paid to workers laid off under the Krümper system lies with the President of the State Employment Office (*Landesarbeitsamt*). He also fixes the amount of the benefit, which may not exceed half of what would otherwise be payable.

The financial effect of these measures on the unemployment insurance funds depends on how many of the additional workers engaged under the Krümper system would otherwise have been entitled to full unemployment benefit. In so far as this is the case, the expense to the funds is reduced by at least half. On the other hand, some additional expenditure is entailed by the fact that more workers can qualify for insurance benefits. There is also a danger that undertakings which have previously had some form of short time in operation that cost the insurance system nothing might transform it into a Krümper system of rotation without engaging any more workers. In order to prevent this, the law provides that the number

of workers actually at work in the undertaking, not counting those laid off, should not be appreciably smaller than the average number employed just before the introduction of the rotation system ¹.

In practice, this system, which has been adopted more often for the purpose of avoiding dismissals than of engaging additional workers, has met with a certain amount of resistance on the part of the parties concerned. The workers consider that the benefits allowed during the period of time off are insufficient for subsistence. The employers, on the other hand, are of the opinion that the period of rotation—at the most one month—is too short and the consequent labour turnover detrimental to the satisfactory working of the undertaking ².

According to a report of the Federal Institution for Employment Exchanges and Unemployment Insurance, up to 15 May 1932 113 permits had been granted. These permits were delivered in respect of the following industries: textile, 22; iron and steel, 17; consumers' co-operative societies, 15; transport, 11; and mines, 8. Twelve public utility undertakings have also adopted this system. The total number of workers occupied in the undertakings in question is 47,500, of whom about 32,300 come under this system. The duration of the lay-off in 68 cases is one month, in 23 a fortnight, in 13 one week, in 6 three weeks, and in one exceptional case five weeks. In 8 cases only was the system introduced with a view to the employment of additional workers (approximately 1,600) ³.

The rotation system has been objected to on social grounds for a reason that is sufficiently serious to be mentioned here. It relates to the continuity of service required of a worker to qualify him for certain insurance benefits or other rights. This question had been raised before the Unemployment Committee of the Governing Body of the International Labour Office, and in the resolution which was adopted by the Governing Body in January 1932 the Committee considered it "desirable to draw attention to the importance of the measures adopted in the legislation of different countries to safeguard the rights to superannuation or to insurance benefits of workers subject to these special arrangements concerning hours of work". If a rotation system

¹ *International Labour Review*, April 1932, 446.

² *Soziale Praxis*, 13 Oct. 1932.

³ "Ein halbes Jahr Krümpersystem", in *Reichsarbeitsblatt*, 1932, No. 16.

is organised entailing long periods of suspension from employment, the continuity of service may be deemed to have been broken under existing regulations, and the worker may consequently be deprived of any of his rights that depend on such continuity. This may be the case for pensions, indemnity for dismissal, holidays with pay, social insurance benefits, prospects of promotion, etc. The objection, which is founded on fact, may be overcome by clearly establishing that any periods of suspension due to the application of a rotation system shall not be considered as interrupting the service in cases where continuity of service is a condition qualifying the worker for benefits or other advantages.

The objection does not arise if the rotation system applies to the holidays granted with pay, since these are not held to break the continuity of service. Provided that the employer replaces the absent workers, the general adoption of holidays with pay offers a practical means of increasing the openings for employment, especially if applied in conjunction with other methods for the reduction of hours of work.

Finally, many undertakings, and especially large ones, have very different departments, and they may find it necessary to use different methods of reduction according to the particular needs of each department. Thus a metal factory may introduce the system of four six-hour shifts for its continuous operations, establish a rotation system in certain other departments, suspend certain work on one day in the week, and in other services engage additional workers to replace those absent on their holidays.

On the basis of the experience actually gained in the matter of reducing hours in different countries, it would be interesting to discover the relative importance of the methods used, account being taken, of course, of the relative number of undertakings in a position to make use of each method. Such general and complete statistics are not available, however. The only enquiry that gives some idea of the importance of the different methods of reducing hours is one carried out in the United States in March 1932 by the President's Organisation on Unemployment Relief¹. Out of 4,926 undertakings which gave information on the methods they had adopted for spreading employment over a larger number of workers, 3,857 had reduced the days worked per week, 2,336 had reduced the hours worked per day, 380 worked shorter shifts in continuous

¹ *Monthly Labour Review*, Sept. 1932, p. 489.

operation, 1,338 had adopted a system of alternating shifts or individuals, and 1,170 a system of rotation of days off. The total of these cases, 9,081, is much larger than the number of undertakings considered, and shows that many of them made use of several methods of reducing hours at once.

For purposes of information, the following table shows which methods were adopted in the different industries covered by the enquiry:

Industry	Number of undertakings	Number of undertakings using specified methods				
		Reduced days per week	Reduced hours per day	Shorter shifts in continuous operation	Alternating shifts or individuals	Rotation of days off
Food	392	260	122	17	77	87
Textiles	589	437	199	57	143	148
Forest	593	460	361	27	137	104
Paper	248	186	95	22	60	57
Printing and publishing	90	53	49	6	18	31
Chemicals	268	201	121	26	55	66
Petroleum and coal	33	23	7	3	10	11
Rubber	38	31	20	11	9	12
Leather	141	106	78	12	22	19
Stone, clay, and glass	310	228	117	47	111	59
Iron and steel	516	515	329	46	190	142
Non-ferrous metals	272	229	144	19	70	79
Machinery	887	755	481	55	294	221
Transportation equipment	132	105	76	9	41	28
Tobacco	39	30	13	6	3	4
Commercial	49	30	14	1	12	13
Public utilities	78	60	17	6	19	21
Retail and wholesale	237	136	91	10	65	63
Steam railroads	11	10	2	—	2	4
Electric railways	3	2	—	—	—	1
Total	4,926	3,857	2,336	380	1,338	1,170

This consideration of the methods of reducing hours of work as a means of increasing employment may be summed up as follows: .

1. It seems possible for all undertakings to spread employment over a larger number of workers by means of reducing hours of work.

2. Among the methods of reducing hours most suitable for adoption in practice, reference should be made to the following:

- (a) for processes carried on continuously: the introduction of the system of four six-hour shifts;
- (b) for discontinuous work performed by two shifts: the reduction of the hours of these shifts and the organisation of a third when production increases;
- (c) for discontinuous work performed by only one shift: the reduction of the number of days worked per week, the reduction of the number of hours worked per day, or the introduction of a rotation system;
- (d) for all processes: the general adoption of holidays with pay, additional staff being engaged to replace the workers on holiday;
- (e) finally, the combined use of two or more of the above methods.

It may sometimes be difficult in practice to apply these methods, but the examples given in the next chapter show that the difficulties are not insurmountable. As Mr. Robert Bosch, who has already been quoted, has said: "In no case should the principle that everyone should have employment be surrendered on account of objections raised on points of detail."

CHAPTER IV

PRACTICAL ACTION

Various attempts to introduce a forty-hour week, or at least to reduce hours of work with a view to increasing available employment, have been made during recent years. The idea of spreading the available employment over the largest possible number of workers has gained ground as a natural consequence of thousands of employees being deprived of employment through the slowing of industrial activity at a time when others more fortunate were able to remain in full-time employment.

The public authorities responsible for the growing army of unemployed and for maintaining social peace have not been slow to realise the need of such a measure and have tried to bring it about by various means.

Moreover, the persons directly concerned have also encouraged a shortening of working time. The workers, whether unemployed or not, have advocated it under the impulse of their common interests. Some employers have carried out this measure in their undertakings, as they wished to maintain the standard of living of their workers and to keep at their disposal a skilled and well-trained staff in view of a possible revival of business.

§ 1. — Action by the Public Authorities

Governments and local authorities have tried in various ways to obtain a fairer division of employment among the workers. In some cases their action has been confined to giving moral encouragement, to making recommendations, accompanied sometimes by the promise of indirect assistance in the form of advice or mediation. In other cases they have used their statutory powers to effect direct reductions of hours in administrative departments and services or for work under their control. Finally, various Governments have taken legislative action with a view to imposing suitable regulations as to hours of work on all undertakings.

Thus, the action of the public authorities in the matter of reducing hours as a means of increasing employment has taken three forms:

- (a) Encouraging or assisting private initiative;
- (b) Direct measures;
- (c) Legislative action.

ENCOURAGEMENT OF PRIVATE INITIATIVE

In a fair number of countries the Governments have tried by persuasion to induce employers who have not already acted spontaneously to reduce hours of work as a means of keeping on and, if need be, enlarging their staff. This encouragement has taken the form of official statements or has been brought to the notice of the persons concerned through the medium of the labour inspectors. Occasionally the authorities have taken more definite action and have tried to lead the parties concerned to reach an agreement.

In *Belgium*, Mr. Heyman, Minister of Industry, Labour and Social Welfare, as far back as November 1931 considered that agreements should be reached between employers and workers with a view to the better distribution of man-hours of work among the largest possible number of workers. In a declaration to the Chamber of Representatives he said: "We shall urge the adoption of such agreements not by legislative action, but with the help of the labour inspectors." He also stated that the Government was prepared to offer its services with a view to the conclusion of voluntary agreements. More recently, in 1932, during the miners' strike, the Government had occasion to take more direct action. It set up a committee to study hours of work and the distribution of work in the industry and this committee is at present engaged in making an investigation. It then intervened to conciliate in the dispute, and the compromise put forward by Mr. Heyman was accepted first by the National Joint Mines Committee, and then by the parties concerned, and thus put an end to the dispute. The agreement reached provided for the re-engagement on a rotation system of the whole of the staff, which, in practice, amounts to a redistribution of employment among the workers concerned.

In the *Netherlands*, in October 1931, the Prime Minister stated that the Government would as far as possible encourage any voluntary efforts made by employers to reduce hours in a period of depression and thus avoid the dismissal of workers, but that it

would have no recourse to legal compulsion as, in its opinion, the responsibility for such measures could and should lie only with the employers.

In *France*, during March 1932, the Minister of Labour and Social Welfare, when notifying the divisional labour inspectors of the resolution on unemployment which was adopted six months earlier by the Governing Body of the International Labour Office and communicated by it to the Governments concerned, stated that this resolution tended towards a reduction of normal hours of work which, if not permanent, would at least remain in force for the period of the depression wherever possible. He added that there was every reason to encourage the conclusion of agreements for this purpose.

In the *United States of America*, during 1932, President Hoover spoke on several occasions in favour of combating unemployment by a reduction of hours of work. Mr. Roosevelt, Governor of the State of New York, in a message addressed in August 1932 to the Federation of Labour of that State approved its policy of supporting a reduction of hours as a means of relieving unemployment.

DIRECT MEASURES

Public authorities, both central and local, have acted in two ways with a view to reducing hours. They have either introduced shorter hours of work in their own services or required shorter hours from the undertakings with which they contract for public works.

Reduction in Services under the Direct Control of the Public Authorities

Measures of this kind have been taken by the Governments of the United States and the Free City of Danzig, the authorities for the administration of social insurance in Czechoslovakia, and various municipalities in Argentina, Czechoslovakia and Germany.

In the *United States of America*, in virtue of the Economy Act of 30 June 1932, the hours of work of Federal employees may be reduced either by giving the staff annual leave without pay for one month or by substituting the five-day week for the five and a half-day week and reducing pay by one-eleventh.

President Hoover has expressed the opinion that this system is, in reality, the five-day week applied to Government services and an

application of a symbol for indicating the shortening of hours of labour for the purpose of giving some employment to a maximum number of people. The plan avoids discharges and will lead to increases in the number of people employed by the Government ¹.

In pursuance of this measure the Department of the Navy and the Department of Labour have adopted the five-day week, which came into operation on 30 July 1932 ².

In order to cope with the increasing unemployment in *Danzig*, the Government of the Free City recently issued an Emergency Order providing for the introduction of the forty-hour week in Government and local departments and in the public services ³.

As the measure was confined to branches of activity under State authority, the Government was able to take direct action. It has not intervened in the field of private enterprise, but its attitude towards its own workers constitutes an example and encouragement to private undertakings. As a matter of fact, when the regulations were introduced the possibility of extending them to private undertakings was not lost sight of. The Government considered the measure to be a means of obtaining practical experience with a view to making it general after agreement with the economic associations.

In *Czechoslovakia*, the Central Social Insurance Institute, acting in the spirit of a Bill drafted by the Ministry of Social Welfare, by a Circular of 20 June 1932 fixed the hours of work in the offices of sickness funds at forty in the week ⁴.

Among municipal authorities, reference may be made to that of Buenos Aires in the *Argentine* Republic which, at the request of the Association of Municipal Workers, adopted a system of rotation for the workers in its services as a means of avoiding the necessity of further dismissals and, wherever possible, of re-engaging workers already discharged ⁵.

In a larger number of cases municipalities have introduced reductions in the daily hours of work which in some cases bring the working week down to forty hours.

In *Czechoslovakia*, the municipalities of Bratislava and Bodenbach have introduced the forty-hour week in their services or under-

¹ *Industrial and Labour Information*, Vol. XLIII, p. 194.

² *United States Daily*, 2 and 26 July 1932.

³ *Industrial and Labour Information*, Vol. XL, p. 196.

⁴ *Ibid.*, Vol. XLIII, p. 201.

⁵ *Ibid.*, Vol. XLI, p. 166.

takings¹. At Bratislava it was thus possible to employ 16 per cent. of the unemployed.

In *Germany* these reductions have usually been the result of agreements between the municipalities and the trade associations concerned. The districts or municipalities of Berlin, Hamburg, Frankfort-on-Main, Dresden, Leipzig and Lübeck have thus been able, not only to avoid discharging a large number of workers, but even to engage unemployed workers. Agreements concluded in December 1930 in Berlin, Hamburg, Frankfort-on-Main and Pomerania have made it possible to give employment to 5,000 to 6,000 unemployed. Other agreements since concluded in Berlin, Hamburg, Dresden and Leipzig have resulted in the employment of about 10,000 persons².

Conditions Imposed on Public Works Contractors

In *Belgium*, in 1931, the provincial councils of Antwerp and East Flanders introduced a clause in the contracts for public works carried out in the name of the province by which the forty-hour week was imposed without a change in the hourly rate of wages³.

In *Australia* and the *United States*, where special public works have been subsidised with a view to finding work for the unemployed, measures have been taken with the object of employing the largest possible number of workers.

In *Australia*, in New South Wales, public works contracts stipulate that the hours may not exceed forty per week spread over five or more days with a daily maximum of eight and three-quarters hours. The hourly wage rate calculated on the basis of the forty-four-hour week is maintained⁴.

In the *United States*, the Emergency Relief and Construction Act approved by the President on 21 July 1932 authorises the granting of credits for the organisation of public works. The regulations issued under the Act by the Bureau of Public Roads concerning the contracts for Federal highway construction work provide that the hours of work for all employees (except those in executive, administrative and supervisory positions) may not exceed thirty in the week. The contracts must further contain

¹ *Ibid.*, Vols. XLIII, p. 53, and XLIV, p. 41.

² *Gewerkschafts-Zeitung*, 17 Jan., 25 April, 30 May 1931.

³ Communication to the International Labour Office.

⁴ *New South Wales Industrial Gazette*, 31 July 1932.

provisions fixing the minimum hourly rate which contractors must pay for both skilled and unskilled labour ¹.

Besides these regulations concerning public works subsidised by the Federal Government, it should be mentioned that certain States have adopted similar measures for the public works they undertake at their own expense. Thus in *Wisconsin*, the hours of the workers employed on such works have been reduced to thirty per week. The contracts contain provisions concerning the fixing of minimum wages ².

LEGISLATIVE ACTION

The legislative action that may be contemplated with a view to reducing hours of work as a means of increasing employment may rely on very different methods and may range from the utmost rigidity to the utmost flexibility. It may relate to the whole of industry without distinction or to particular industries or groups of industries; it may be temporary or permanent; it may establish strict regulations or allow wide latitude in the methods of application; it may take effect by direct compulsion or merely give force of law to the agreements freely concluded between the parties concerned.

In addition to the legislative measures taken by the Government of the Free City of Danzig and by American authorities for the direct reduction of hours in certain undertakings or services, more general measures have been adopted in Germany and Poland. In other countries proposals or Bills have been submitted to the Parliaments. Here, however, it will be sufficient to note only those Bills which, because they have been introduced by a member of the Government, entail, if not the responsibility of the Government as a whole, at least the responsibility of their author in his official capacity. Of this kind only one will be considered, that prepared by Mr. Czech, Minister of Social Welfare in the Czechoslovak Republic.

In *Czechoslovakia*, during 1931, Mr. Czech, Minister of Social Welfare, prepared the draft of a Bill changing most of the provisions of the eight-hour day Act of 19 December 1919 in a restrictive sense. This Bill, of which only the principal provisions will be mentioned here, would apply to all undertakings covered by

¹ *Industrial and Labour Information*, Vol. XLIII, p. 421.

² *Ibid.*, Vol. XLIII, p. 384.

the Industrial Code or carried on for profit, and to undertakings in agriculture and forestry unless a decision to the contrary were taken by the Minister of Social Welfare in agreement with the Minister of Agriculture. Hours of work would, as a rule, not exceed eight per day and forty per week (instead of eight per day and forty-eight per week as at present). In mining establishments (mines, coke ovens, roasting furnaces and blast furnaces) hours would, as a rule, be limited to seven and a half per day and thirty-six per week calculated from bank to bank. The total overtime allowed would be reduced from 240 to 120 hours (sixty hours for underground mines) in the year.

This Bill makes no kind of provision for administrative procedure or for discrimination between different kinds of activity except in the case of mines, for which strict regulations are provided, and thus constitutes an extremely rigid example of the type of permanent regulations directly applicable to all undertakings throughout the country. It has already been submitted to various Ministries and is now under consideration by the Social Affairs Committee of the Chamber of Deputies.

In *Germany*, various legislative measures have been taken since more than a year past with a view to increasing the available employment by a reduction of the working week to forty hours. There was first the Decree of 5 June 1931, supplemented by the Administrative Regulations of 30 September 1931, which gave the Federal Government, subject to the approval of the Federal Council, the power to reduce by Order the hours of work in certain branches of industry or public offices or for certain categories of workers to forty in the week. This right was restricted to undertakings and administrations normally employing not less than ten workers or ten salaried employees. Before such an Order could be issued, the authorities must consider whether a reduction in hours of work was technically and economically possible and must also have regard to the number of workers available on the labour market. The limit of the reduced working week was thus fixed at forty hours. A longer week might in principle be allowed, but only in exceptional cases, in particular in continuous processes. The limits applied only to the individual hours of work and did not in any way affect the hours worked by the undertaking as a whole. The responsibility for distributing the hours of work among the workers was left to the parties concerned and, in order to leave all possibilities open the Decree provided that the limits specified by an Order should be held to be observed if they were

not exceeded on the average over a period of six consecutive weeks.

The hours of work fixed by Order in accordance with these provisions would be substituted for the normal hours prescribed by the legislation on hours of work. The Decree also dealt with the question of overtime and contained the provisions needed to prevent the permissible exceptions from being used to nullify the effects of the reduction of normal hours. It refrained from introducing compulsion as a means of increasing the number employed, but the explanatory memorandum to the Administrative Regulations stated in this connection: "It need hardly be said that the possibility of finding employment for a larger number of workers will be the chief object of the negotiations with workers' and employers' organisations in the different branches of economic activity and the condition on which the issue of special Orders will be made to depend."

The question of wages was also dealt with, and the employer was expressly authorised to reduce the wages previously fixed by collective agreement or individual contract of employment by an amount corresponding to the reduction of hours, unless the agreement or contract provided for more favourable terms for the workers.

Finally, it should be noted that the Government never intended to undertake an immediate statutory reduction of hours. The explanatory memorandum to the Decree stated that the reform was to be carried out in the first place "by means of voluntary agreement".

Thus, these regulations were founded, if not in the letter, at least in the spirit, on the agreements that might be concluded between the parties concerned. They aimed in essence at setting up procedure for transforming contractual obligations into binding legal obligations. In several respects, moreover, the regulations were made sufficiently flexible to facilitate their application to any industry.

What were the practical results? The Minister of Labour tried at first to persuade industries where the reduction of hours appeared possible to conclude agreements, and during June and July 1931 he negotiated with various industries. Hours were reduced by collective agreement in the greater part of the brewing industry, the chemical industry, the stone and earth industry, and the Berlin building industry. In several other industries the negotiations broke down, mainly on the question of wages.

The Minister of Labour next drafted a number of Orders for

the compulsory reduction of hours, but none of these has been issued. The chief obstacle to such compulsory reduction was the question of wages, especially after the general cut in wages and salaries in December 1931, which reduced earnings by an average of nearly 10 per cent. This made it seem neither possible nor expedient to demand further sacrifices from the workers, a condition set by the employers to their acceptance of the measure.

The Minister of Labour temporarily suspended his efforts. In the meantime, however, a Decree of 6 October 1931 facilitated the adoption of the Krümper system of rotation previously described¹ by granting the workers concerned unemployment benefit at a reduced rate during the period of suspension from work.

In April 1932, the Minister of Labour decided to request the Government to take fresh action with a view to counteracting unemployment by a reduction of hours. A new Order was drafted and submitted to the Governments of the different Federal States and representatives of the employers' and workers' organisations concerned. This Bill provided on the one hand, for a general reduction of the overtime allowed under collective agreements, and on the other for the progressive reduction of hours to forty in the week in certain specified industries, beginning with mines and salt works, the stone, chemical, paper and printing industries, malt works, breweries and the building industry. This draft Bill, however, came to nothing.

The Minister then made another attempt to promote voluntary reductions of hours. In June 1932 he requested the President of the Federal Institute for Employment Exchanges and Unemployment Insurance to give every possible assistance in effecting a reduction of hours of work. For this purpose he recommended setting up committees in the labour offices of the different States to study the question of reduction and to consider the proposals put forward by employers' and workers' organisations, employment exchanges or inspectors. The Minister of Labour hoped, in particular, to obtain the support of the employers in view of the fact that he had taken into consideration their opposition to any statutory regulation of hours of work. The efforts of the labour offices produced satisfactory results, in particular in the Rhineland, where the discharge of thousands of workers was thus avoided and the engagement of additional workers made possible.

In view, however, of the widespread nature and severity of

¹ Cf. p. 62.

the crisis, Mr. von Papen's Government decided to attack the problem of unemployment from a new angle. The Legislative Decree of 4 September 1932 for the revival of industrial activity contains provisions concerning employment. Any employer who takes on more workers or salaried employees between 1 October 1932 and 30 September 1933 than he was employing in the months of June, July and August 1932 will be entitled to a bonus of 400 RM., in the form of a tax certificate, for each additional worker or salaried employee engaged on an average for one year. For this purpose purely seasonal increases of staff will not be taken into account. The total amount of certificates which may be issued under this head is fixed at 7,000,000 RM., which will make it possible to subsidise the employment of 1,750,000 unemployed persons for a year.

As another means of facilitating an increase in employment a Legislative Decree of 5 September 1932, supplemented by Administrative Regulations of 14 and 21 September, authorises employers who increase their staffs to reduce individual wages in accordance with a sliding scale. Under the Decree this reduction will take effect only in respect of ten hours of work in every forty, from the thirty-first to the fortieth hour, and may not be more than 50 per cent. It follows that the total reduction will not exceed $12\frac{1}{2}$ per cent., but this limit will be reached only when the number of workers has been increased by one-fourth. The measure is to remain in force for six months. The Decree also provides that the official conciliators may authorise the payment of lower wages than those fixed by collective agreement in cases where the precarious situation of the undertaking renders the current rates too heavy for continued working. The conciliator cannot, however, authorise a reduction of more than 20 per cent. in the wages laid down by collective agreement.

The Decree of 14 September 1932 containing regulations for the application of the above Decree defines the conditions under which a reduction of hours of work may be accompanied by a reduction of wages. It prescribes in particular the method of estimating the increase in staff and contains special provisions for favouring those employers who had already reduced hours before the issue of the Decree of 5 September in order to avoid dismissals. The reduction of wages applies only to that part which corresponds to the rate fixed by collective agreement excluding family and other allowances. The Decree of 21 September specifies the method to be used in the case of workers employed on piece-work.

Thus, the German Government, in its attempts to promote the re-engagement of workers, completes its policy of reducing hours of work on the basis of legislative measures or of agreements between the parties by giving a twofold advantage to the employers (a bonus for the engagement of workers and a reduction of wages) in the hope that employers will thereby make an effective contribution towards the mitigation of unemployment. But these new measures are opposed by the workers, who suffer both by the reduction in the number of hours of work and by the reduction in the hourly rate of wages.

In *Poland*, in October 1931, the Parliament passed an Act amending the Act of 18 December 1919 concerning hours of work, by the insertion of a provision giving the Government the power in times of economic depression to reduce hours of work so as to distribute employment over a larger number of workers and thus to diminish the number of the unemployed. Section 6 (*d*) of the 1919 Act, which allowed hours of work to be increased in the event of national emergency, now runs as follows:

In the event of national or economic emergency, the Government, on receiving a proposal from the Minister of Labour and Social Welfare drawn up after consultation with the employers' and workers' organisations, shall be entitled to promulgate Orders *permitting the extension or requiring the reduction* of daily or weekly hours of work. These Orders shall remain in force for a specified period not exceeding one year, and may be limited to specified branches of industries or classes of undertakings throughout the territory of the State or in the territory of the different administrative units.

The principal feature of this provision from the present point of view is that it permits the reduction of hours of work by an Order of the Government issued on the proposal of the Minister of Labour after consultation with the employers' and workers' organisations. This procedure is relatively rapid and offers by means of the two stages involved useful guarantees that the measure taken is expedient. Another feature of this measure is its flexibility. In the first place, latitude is allowed as to the scope of the Orders issued and the area they cover. There is also a certain latitude as to the amount of the reduction, which is left to be fixed by the individual Orders. The reduction may relate to the day or to the week, and it is open to the undertakings to apply it in the manner they consider best. Finally, the measures can only be temporary, since the Orders are to remain in force for not more than one year.

The Office is not aware that the Government has yet made use of the powers thus conferred upon it.

* * *

The above account will have given some idea of the different forms of action taken by the public authorities in support of a reduction of hours of work as a means of maintaining or increasing employment. It is difficult to estimate to what extent the encouragement given to private initiative has had practical results, since the employers are ultimately free to act as they choose. The direct measures taken by the public authorities have been isolated, and even when general in character have covered only a relatively few branches of activity. Their legislative measures are still not sufficiently firmly founded and are somewhat hesitating in character, while their practical action does not yet clearly indicate the relative value of the methods employed. In the few cases in which national Governments have adopted effective legislation they have been inspired by a caution that can easily be understood, and this is no doubt why the results obtained have been very limited. It would seem as if only general regulations that are strict enough to establish a real obligation and, at the same time, flexible enough to allow of adjustment to the varied needs of different undertakings, would be capable of bringing about the desired results.

§ 2. — Private Initiative

Private initiative has been taken both by employers and by workers. In the first case the action is unilateral, since the employer of his own authority and will organises his work on the basis of a shorter working day or week, or carries out the change in consequence of an agreement with his staff concluded on his initiative. At other times the workers take the initiative for a reduction, a measure that clearly cannot be carried out until an agreement has been reached with the management of the undertaking. In fact, there are two methods: on the one hand, the unilateral action of the employer; on the other, an agreement between the employer and his workers concluded on the initiative of either party.

Important employers' organisations have expressed themselves in favour of shorter hours of work as a means of reducing

unemployment. In the United States in September 1932, the Director of the American Petroleum Institute, which covers virtually the entire oil industry in the United States, recommended the member companies as an emergency measure to reduce working hours to a maximum of forty in the week or an equivalent. During the same month the United States Chamber of Commerce adopted a report in favour of active participation in the movement for the rational distribution of employment on the basis of the forty-hour week. Some months ago the Federal Reserve Banking and Industrial Committee set up a committee of industrialists, which has advocated the reduction of hours with a view to spreading the existing volume of employment. This movement known as the "Share-the-Work Movement", encouraged by President Hoover, has made much headway. In France, the Federation of the Metal Mining and Engineering Industries issued a circular in January 1931 to the affiliated companies in the metal and engineering industries, suggesting that so far as possible they should reduce the hours of all their workers rather than dismiss workers. In November 1931 the General Confederation of French Production addressed two letters to the presidents of its affiliated organisations, urging them to observe the same principle. The Central Union of Polish Mines, Industries, Commerce and Finance sent a circular to its members in October 1931, inviting them to help the National Unemployment Committee by trying to provide fresh employment through a reduction in hours of work.

It would also be possible to compile a long list of agreements concluded between employers and workers for the reduction of hours as a means of maintaining or creating employment. There can be no question here of mentioning every case of a reduction in hours due to private initiative. All that will be considered below are certain characteristic examples of increasing the possibility of employment, reference being made first to measures adopted in respect of continuous processes and then to those in respect of discontinuous work.

CONTINUOUS WORK

Several large undertakings have been changed over from a three-shift to a four-shift system, thus reducing the individual working week to thirty-six or forty-two hours according as the undertaking is in operation for six or seven days in the week. In other undertakings the reduction of hours has been effected

on the basis of the forty-hour week by the introduction of a system of rotation of staff.

Food Industry

The large oil factories, the "Harburger Oelwerke Brinckman und Mergell" at Harburg-Wilhelmsburg in Germany¹, reduced in October 1930 the hours of work of their staff. This was effected by the introduction of an extra shift: instead of working three eight-hour shifts, the system of four six-hour shifts was adopted. As a result of this reduction the undertaking, which employed 1,000 workers, was able to engage 350 additional workers. As it could not tolerate any increase in the cost of production, no compensation in the form of wages was granted. But before introducing the new system the management consulted the works council, which accepted the sacrifice of a fraction of wages so as to reduce the number of unemployed. In order to mitigate the effects of this measure the workers with the lowest wages were transferred to the fourth shift, which is the most highly paid. The newly engaged workers included brothers, sons and other relatives of those already in the factory, so that some families have a higher total income than before the reduction in hours.

After a few weeks of the new system it was found that the cost of production had not risen and that social charges had risen very slightly, representing 1 per cent. of wages. The more frequent changes of shifts had not reduced output, and in several departments it was even found necessary to restrict productivity lest it nullify the effects of the measures adopted. It should be mentioned, however, that a few months after the introduction of the thirty-six-hour week the hourly wages of all oil workers were reduced by agreement by $4\frac{1}{2}$ per cent. In order not to impose a further reduction in income on the workers, the company decided to increase the working week from thirty-six to forty hours².

In view of the excellent results obtained by this undertaking, several other oil mills, for instance at Mannheim and in the Rhineland, similarly reduced their hours while at the same time reducing wages in proportion³.

¹ *Die Arbeitszeitverkürzung als Mittel zur Behebung der Erwerbslosennot. Gedanken und Erfahrungen der Harburger Oelwerke Brinckman und Mergell.* Dec. 1930.

² *Soziale Praxis*, 2 July 1931.

³ *Ibid.*, 12 Feb. 1931.

After a few weeks of satisfactory experience the management of the Harburger Oelwerke published a pamphlet in which it advocated the reduction of hours as one of the most effective means of combating unemployment ¹.

The Kellogg Food Company ² (United States), whose chief factory is at Battle Creek, Michigan, reduced hours of work from eight to six in the day as from 1 December 1930. The Company still works a twenty-four-hour day, and the reduction in individual hours has enabled $33\frac{1}{3}$ per cent. more workers to be employed. The minimum wage is 4 dollars for men, which is the normal rate paid under the eight-hour system, and the average daily wage is 5.40 dollars. The undertaking did not reduce hours until it had carefully examined every aspect of the problem. It decided not only to reduce the number of working hours, but at the same time to raise the basic hourly wage by $12\frac{1}{2}$ per cent., so that the workers have more leisure and increased purchasing power. The workers have also collaborated with the employers to increase the number of those employed and thus reduce unemployment. After several months' experience of the new system. Mr. Brown, President of the Company, stated that if no unforeseen factors intervened, the Kellogg Food Company would permanently maintain the system of four six-hour shifts.

On the recommendation of the Polish National Committee on Unemployment, the sugar industry of Western Poland has introduced the system of four six-hour shifts in those sections where there is a sufficient supply of skilled labour, and has in consequence been able to employ 4,500 more workers than during the previous season although production was much less ³.

In the German brewing industry over sixty agreements have so far been concluded reducing the working week from forty-eight to forty hours spread over five days. These agreements cover 559 undertakings employing over 30,000 workers. The loss of wages has been partly compensated for in the case of about 22,000 workers ⁴.

¹ Cf. footnote 1 on p. 79.

² Lewis J. Brown, President of the Kellogg Company, Battle Creek, Michigan: *What of the Six-Hour Day?*

³ *Industrial and Labour Information*, Vol. XLI, p. 270.

⁴ Communication to the International Labour Office and *Bulletin of the International Federation of Food Workers' Unions*, Zurich, July 1932.

Chemical Industry

The Executive Committee of the Manufacturing Chemists' Association of the United States ¹ has recommended to its members the substitution of a system of four six-hour shifts for that of three eight-hour shifts, without reducing hourly wage rates, so as to be able to increase the number of workers by about $33\frac{1}{3}$ per cent. A number of chemical undertakings have accepted these recommendations. In one factory employing 600 workers the change-over to the six-hour shift enabled the staff to be increased by 135.

Petroleum Industry

The Standard Oil Company ² of New Jersey introduced the forty-hour week as from 1 July 1932 for the whole of its staff employed in the United States. The reduction was first put into effect when a loss of business due to the depression threatened wholesale discharges and was finally extended to take in salaried employees and other workers even where there was no over-supply of labour. Under the new plan the working week has been reduced from six to five days, but difficulties were met in making the application of the five-day week general, since in some manufacturing operations work is continuous. In the refineries this work was previously carried out by shifts of three workers each working six spells in the week, or a total of eighteen spells per week. The remaining three spells were worked by an additional worker. Now the management has introduced an additional worker, so that the four workers each work five spells in the week, or twenty spells per week, and the twenty-first spell is worked by a man who during the four remaining days of the week is employed as a helper. The following schedule is a typical example of the manner in which work may be distributed among the different workers ³. A, B, C and D are the permanent regular workers, and E is a helper four days in the week and replaces a regular worker on one day a week in turn:

	First week T. W. Th. F. S. S. M.	Second week T. W. Th. F. S. S. M.	Third week T. W. Th. F. S. S. M.
From 7 a.m. to 3 p.m. . . .	A A A A B B	B B B C C C C	C D D D D D (E)
From 3 p.m. to 11 p.m. . . .	C D D D D D (E)	A A A A B B	B B B C C C C
From 11 p.m. to 7 a.m. . . .	B B B C C C C	C D D D D D (E)	A A A A B B

¹ *United States Daily*, 2 October 1931.

² *Industrial and Labour Information*, Vols. XLIII, p. 195, and XLIV, p. 18.

³ *Work-Sharing Programme of Standard Oil Company (New Jersey)*

In the marketing field many service stations of the Company employ only one or two men at a time and their absence one day a week interrupts continuity of service. Each undertaking is therefore empowered to reduce hours in its different services either regularly each week or over a longer period than the week. The plan is very flexible and provides further that if, in spite of the reduction of the working week to forty hours, there is a surplus of staff in an undertaking or service, a further limitation of hours may be undertaken so as to effect a balance between the number of men and the employment available. In no case, however, may the total hours be reduced to less than 50 per cent. of the normal.

The adoption of this plan resulted in the immediate employment of some 450 persons in subsidiary undertakings, and it is probable that as the new programme becomes fully effective additional employment will be available, with work and employment properly balanced. Another result was the retention of workers who were due for dismissal if the six-day week had been maintained. As a matter of fact, 180 workers would have had their service terminated on 1 July 1932 but for the sharing out of work which took effect on that date. Together with the reduction of hours in refineries, producing, pipeline and gas operations which have not been developed since 1930, the net effect of the several efforts to retain workers by reducing hours of work has meant jobs for some 2,900 workers, or 9 per cent. of the total on the payrolls of the companies in the United States. Where workers have been laid off for reasons other than inefficiency, it has been due to inability to fit them into work for which they lacked the necessary training.

The wages of workers on time rates are calculated on the same basis of time as before, but salaried employees paid by the month who before 1 July 1932 had been on a five and a half-day schedule, have had their salaries reduced by one-eleventh. In no case may the pay be reduced to less than 100 dollars per month. The reduction of one-eleventh mentioned above applies also to the salaries of the higher grade staff and the management, even though the responsibilities of the post in question make a five-day week impossible. If hours of work are still further reduced, the pay will be reduced in proportion.

The Standard Oil Company having received enquiries from other industries desirous of knowing how the forty-hour week of five days stood the test of experience, reports were sought from all departments and the material obtained indicates that the results

have been satisfactory. The objectives aimed at have been achieved and the difficulties have been overcome. The field managers and department heads have found that there has been no drop in efficiency. In many cases, on the contrary, there has been a gain through the resumption of the policy of promotions, which were practically ended so long as men were being laid off. Wherever possible, full or part time vacancies have been filled by promotions from lower posts. The Company considers that the adoption of the plan has enabled it to effect economies.

In accordance with the recommendation of the American Petroleum Institute, the Humble Oil and Refinery Company at Houston adopted this year the forty-hour week of five days instead of the forty-eight-hour week, which measure has enabled 1,200 to 1,300 additional workers to be engaged ¹.

The Socony Vacuum Corporation in the United States has similarly introduced as from 1 November 1932 the forty-hour week of five days. The reduction applies to the 30,000 wage-earning and salaried employees employed by the undertaking, including the managers and other higher officials. Pay has been reduced in proportion to the reduction in hours except in the case of earnings not exceeding 100 dollars a month. The President of the Corporation has said that, although it was not an easy matter to introduce a five-day week in a continuous business, he was certain that it was entirely practical and that it would help to relieve unemployment ².

Paper Industry

In the United States, a Wisconsin paper company has introduced the five-day week in its four factories. In the continuous-process departments, the workers are employed in shifts in such a way that their individual hours in no case exceed forty per week. Although additional workers have had to be trained, it has been possible to engage about 100 extra workers ³.

Rubber Industry

The important India Tire and Rubber Company in the United States⁴ has been led to reduce the hours of work of part of its staff.

¹ *New York Times*, 23 Oct. 1932.

² *Industrial and Labour Information*, Vol. XLIV, p. 235.

³ SHARE-THE-WORK MOVEMENT OF THE FEDERAL RESERVE BANKING AND INDUSTRIAL COMMITTEES: *How Share-the-Work Has Been Applied, Different Methods that Have Succeeded in Widely Different Cases.*

⁴ *Monthly Labour Review*, Aug. 1932.

In the summer of 1931 it introduced the system of four six-hour shifts instead of three eight-hour shifts in the vulcanizing department, where the work is carried out in the heat and damp and considerable skill is required. Tire demand is naturally highest in the hot season and continuous operation is therefore necessary in this department. The management observed that the attempt to keep the men at work for eight hours per day on seven days in the week had not proved satisfactory over a period of several years from the standpoint of production. In consequence of the reduction of hours and the increase in the number of workers by one-third, production has risen. Absences, which had previously been frequent, declined almost to the vanishing point, and the labour cost per unit fell by 8.2 per cent. This percentage was computed by comparing two months in which conditions were identical with the exception of hours of work.

After several months of experience covering both the busy and slack seasons, it was decided to apply the four-shift system to other departments of the plant. At the present time most of the workers are on the six-hour basis, and the question of extending the measure to the whole staff, including the salaried employees, is under consideration. No upward adjustment of rates of pay was made when the six-hour shift was introduced.

Glass Industry

The German sheet-glass industry¹ introduced on 1 August 1932 the system of four shifts of six or eight hours, the different undertakings being free to choose either period in agreement with the workers. The classes of workers covered are the following: in the Fourcault and Pittsburgh works, shift foremen and their deputies, drawing-machine minders, platform-men, watchers, cutters, crackers-off, fillers, skimmers, and stokers; in the Libbey-Owens works, foremen-machinists, leading machinists, machinists, apprentices, skimmers and fillers. The working week has been reduced from fifty-six to forty-two hours.

The Fourcault sheet-glass works in Belgium² are at present working five eight-hour shifts, equivalent to an average of thirty-three and a half hours a week, as an emergency measure.

One of the principal glass factories in the United States³ has

¹ Communication to the International Labour Office.

² *Ibid.*

³ SHARE-THE-WORK MOVEMENT, *op. cit.*

substituted the system of four six-hour shifts for that of three eight-hour shifts, and the reduction has taken effect in factories in different parts of the country. The result of the measure has been the engagement of 2,000 additional workers, so that the total employed is now about 8,000.

The Czechoslovak glass factories¹, too, have recently adopted the system of four eight-hour shifts as a provisional measure with a view to employing the largest possible number of workers during the present period of unemployment.

DISCONTINUOUS WORK

In discontinuous work a certain number of hours of work may be made use of for the employment of additional workers, either by reducing the number of days worked per week or the number of hours worked per day, or by introducing a system of rotation of staff. In most cases the reduction has been effected by the adoption of the forty-hour week of five days.

The various measures taken may be illustrated by the following examples:

Mining

A collective agreement was concluded on 1 October 1931 in the Lower Silesian coalfield² (Germany) on the basis of a special rotation system, known as the Krümper system, which has been described above. This measure has made it possible to avoid the discharge of 1,800 workers. Under the agreement, the number of workers has been increased by one-sixth of the number required to extract the quantity of coal produced when the normal hours of work are followed. On the other hand, one-seventh of the total number of workers are laid off each month in rotation. While they are laid off, they receive half the sum to which they would have been entitled for the annual holiday granted after twelve months' service. The workers may not be discharged while laid off except for causes justifying immediate dismissal. At the end of the period they have the right to resume their employment in the same wage group as before.

¹ Communication to the International Labour Office.

² *Industrial and Labour Information*, Vol. XL. p. 193.

Food Industry

The Meinel Company of Vienna ¹ (Austria), which manufactures and trades in foodstuffs (chocolate, tea, coffee), reduced hours of work at the beginning of 1932 from forty-eight in the week to forty-three. The workers are paid for forty-five hours in the week as the management was of the opinion that they could not be paid at the full rate for shorter hours and ought to contribute to the general sacrifice. The introduction of the measure has been followed by a fall instead of a rise in the cost of production, in consequence of the increased output due to the introduction of measures of rationalisation at the same time.

In Rome an agreement has been concluded between the provincial group of pastrycooks in the Federation of Commerce and the Provincial Federation of Trade Unions with a view to making the system of rotation introduced for the workers more effective. The oven-men and similar staff, including delivery-men, must take it in turns to give up their work to unemployed workers at the rate of two days per month. For the "first-hands" a special agreement provides that they shall contribute to the unemployment fund at the rate of two days' wages ² per month.

Chemical Industry

An agreement reducing the working week from forty-seven to forty hours was concluded in September 1932 between the British Transport and General Workers' Union and Mander Bros. of Wolverhampton ³, a firm of paint, colour, varnish and ink manufacturers. The firm had decided on a rationalised method of production and the introduction of a fresh system of piece-rates. These changes would in the ordinary way have involved a serious displacement of labour unless hours of work had been reduced. The agreement reached established a five-day week at the same rate of wages, as a minimum, as was previously paid for forty-seven hours.

The introduction of new working methods has made it possible to grant the workers increased leisure, since they are free on Saturdays and Sundays, and so far as possible enables the firm to avoid discharging staff. It has undertaken not to discharge any worker during the whole period of reorganisation, that is to say, six

¹ *Industrial and Labour Information*, Vol. XLII, p. 320.

² *Il Lavoro Fascista*, 1 May and 8 Oct. 1932.

³ *Industrial and Labour Information*, XLIV, p: 106.

months, whatever the results obtained. If at the end of this period a reduction of staff is nevertheless found necessary, it was agreed that any such reduction should be met by using the pension arrangements to compensate workers displaced.

The firm has adopted this measure because it considers it inevitable in all rationalised undertakings. Its motives have been strictly economic and it is convinced that the mechanisation of production will allow of a marked increase in the workers' spare time. It hopes that other British industries will follow its example and thus help to solve the great and difficult problem of employment.

Tobacco Industry

In the German cigarette industry ¹ an agreement was concluded at the beginning of 1931 between the cigarette workers' organisations and the employers' organisation for a reduction of the working week. This agreement was recently renewed until 30 September 1933. The hours of work were reduced from forty-eight to forty-two and a half in the week. In 1931, the industry employed over 20,000 persons. The employers' organisations agreed to pay forty-five hours' wages for the forty-two and a half hour week, which represents an increase of 5.9 per cent. in hourly wages. The measure has made it possible to avoid many discharges of workers that would otherwise have been necessary owing to the depression of industry and the rationalised methods of production introduced.

In the Bulgarian tobacco warehouses ² the length of the working day has been reduced, at the request of the Department of Labour and Social Insurance, from eight to seven hours as from 15 October 1931. In the warehouses in the six principal centres of the tobacco trade, the hourly wage-rates have been temporarily cut in proportion to the reduction in hours of work. This measure has helped to diminish the seasonal winter unemployment which has been aggravated by the general unemployment prevailing throughout the country.

Printing Industry

The Berlin workshops of the Union of German Printers ³ have reduced hours of work by agreement to forty in the week spread

¹ Communication to the International Labour Office.

² *Industrial and Labour Information*, Vol. XLI, p. 74.

³ *Gewerkschafts Zeitung*, 28 March 1931.

over five days as from 16 March 1931. The undertaking agreed to be responsible for 40 per cent. and the staff for 60 per cent. of the reduction in wages resulting from this step. It thus proved possible not only to avoid dismissals but to engage a certain number of unemployed workers.

In the London newspaper printing presses the hours of work of compositors were reduced some years ago with a view to increasing the number of workers. Agreements were recently concluded between the compositors' organisations in London and Dublin and the newspaper proprietors' associations concerned¹. Hours were reduced in the following manner: each worker gets one day or night off each fortnight, reducing the number of days worked per fortnight to eleven instead of twelve, while the working period of the undertaking remains normal. In Dublin the agreement applies during seven months of the year—October to April exclusive. The other five months the workers work continuously but are entitled to a holiday with pay of a fortnight. Thus during seven months each worker has one day (or night) off per fortnight and during the remaining five months of the year a fortnight's holiday. The total periods of absence in each of the two periods bear approximately the same proportion to the total working time of the establishment and it is therefore possible to take on additional men who work regularly the whole year round. This scheme affords an interesting example of the combination of a system of rotation, as commonly understood, with the system of paid holidays, the two being so adjusted as to allow of permanent additional employment being given. In one of these newspaper printing firms whose plant is worked during forty-five hours a week, the individual members of the staff each work forty-five hours in one week and only thirty-seven and a half hours in the following week, making an average of forty-one and a quarter hours per week. The result of the reduction of hours in this firm, which employs about 140 persons, was the employment of twelve extra workers to take the place of the twelve men off each day and of the men taking their fortnight's holiday. Wages remained the same for the forty-one and a quarter-hour average week as for the forty-five-hour week.

¹ *Industrial and Labour Information*, Vol. XLIV, p. 38.

Textile Industry

One of the largest woollen goods factories in the United States ¹ recently adopted the five-day week with a view to sharing work as equitably as possible. The staff works in two shifts, the first from 6 a.m. to 2 p.m. and the second from 2 p.m. to 10 p.m. Each shift has a half-hour break. It is estimated that this measure has allowed of increasing the staff by 10 per cent.

A Chicago clothing factory ² has also introduced the five-day week of forty hours with a view to avoiding the dismissal of some of its workers. Wages have been reduced in proportion to the reduction in hours except in the case of workers earning less than 20 dollars per week. Since the introduction of the measure the undertaking has been obliged to reduce hours by a further 10 per cent.

Metal Industry

The "Hirsch Kupfer Messing Werk A. G." at Eberswalde in Germany ³ introduced the forty-hour week for all its workers with the exception of those drawing a minimum wage. It had 1,753 workers working forty hours a week and only 210 working forty-eight hours. The reduction in hours has allowed of the engagement of over 200 unemployed workers.

Motor-Car Industry

The Minerva Motor Works at Antwerp ⁴ (Belgium) have temporarily adopted a forty-hour week of five eight-hour days instead of a forty-eight-hour week for the whole of their staff of about 2,000 workers. The new time-table is from 8 a.m. to 12 noon and from 12.30 p.m. to 4.30 p.m. from Monday to Friday inclusive. The management had been compelled in October 1931 to discharge several hundred workers, with the result that the workers held a meeting and decided to demand a more equitable distribution of work through the introduction of shorter hours. Negotiations took place and the management made the following offer, which was accepted by the workers' delegates. A forty-hour week was

¹ SHARE-THE-WORK MOVEMENT, *op. cit.*

² *Ibid.*

³ *Gewerkschafts Zeitung*, 4 April 1931.

⁴ *Industrial and Labour Information*, Vol. XLI, p. 36. and communication to the International Labour Office, Nov. 1932.

to be introduced as a temporary measure in order to avoid further dismissals and the workers already discharged were to be taken on again before the end of the year. Altogether over 400 workers have been kept in employment in consequence of this measure. At the same time as hours were reduced, the management introduced a new system of wage bonuses which has led to an increase in labour output. The measure has had no effect on the cost of production, since the total wage-bill has remained unchanged.

The F.I.A.T. establishments have introduced in their motor-car factory at Lingotto in Italy¹, which employs over 10,000 workers and 1,500 salaried employees, a system of stabilisation of employment of great interest. The collective agreement for metal workers provides that the normal working day may be reduced by two hours if the work so requires. This provision has led to the adoption of a permanent system intended to guarantee relative stability of employment to the workers. In 1929, when the effects of the depression began to be felt, the firm decided to fix the hours of work, which averaged forty per week, in such a way as to keep production always adjusted to the potential market. To achieve this purpose agreements were concluded with the workers' organisations which enable the workers to benefit by the revival of business in the spring and summer as compensation for the short time worked in the autumn and winter. The workers in the motor-car works who are employed for less than forty hours per week during November, December and January are credited with forty hours' work and paid standard wages (basic wage plus supplement). The amounts thus paid for the hours not worked are recovered by way of deduction during the weeks in which over forty hours are worked. The debit items and the deductions are clearly shown on the pay cards. Generally speaking the entries have not been questioned from the workers' side nor has the firm incurred losses on account of the advances made. Bearing in mind the aim of this measure, which is to guarantee stability of employment, it can even be said that once the scheme had been properly explained, the firm overcame the doubts of the workers due to the fear that the result might be to assimilate the motor-car industry to a seasonal industry and so affect hours of work and overtime pay.

Another important undertaking, the Opel motor-car factory in Germany², after negotiations with the Minister of Labour for

¹ Cf. INTERNATIONAL LABOUR OFFICE: *Studies on Industrial Relations*, II. Studies and Reports, Series A, No. 35. Geneva, 1932.

² Communication to the International Labour Office.

the State of Hesse, decided to reduce the working day to seven and a half hours, which enables it to give regular employment to an additional 130 workers.

Shipbuilding

The "Howaldt-Werfte A. G." shipyards in Hamburg and Kiel¹ (Germany) adopted a forty-hour week in February 1931 and reduced wages by 6.82 RM. per week, or 1.13 RM. per day. The Municipality of Kiel undertook to pay the workers' contributions to the unemployment insurance fund, so that the daily wage was reduced by only 0.91 RM. In exchange, the shipyard has undertaken to employ at least 8 per cent. of the unemployed in receipt of public relief. The undertaking has also agreed to engage extra supervisory staff and salaried employees and to pay the cost of the increased social charges resulting from the engagement of fresh staff.

A method resting on the same principle as that of the five-day week is the reduction of hours of work over a period longer than the week. This has taken place in the German shipyard "Bremer Vulkan"² where the management concluded an agreement in March 1931 with the works council for the reduction of hours of work over the fortnight. During the fortnight, the workers work ten days with holidays on Saturday and Monday. This measure has made it possible to avoid the dismissal of a large number of workers and to engage unemployed workers.

Mechanical and Electrical Engineering

The important German firm of Robert Bosch A. G. at Stuttgart³, which produces electrical apparatus and precision instruments and in particular magnetos for motor-cars and has over 2,500 branches in Germany and abroad, two years ago reduced the working day in its establishments to six hours. In consequence the company was able to employ in Germany a larger staff in 1931 than in 1930 in spite of the depression. According to its report for 1931, the total number employed at the end of the year was 8,422 workers and salaried employees, an increase of 308 over the previous year. Production was maintained as regards quantity, although its value fell by 17 per cent. owing to the fall in prices.

¹ *Gewerkschafts Zeitung*, 28 March 1931.

² *Ibid.*, 4 April 1931.

³ *Vorwärts*, 15 Sept. 1932.

The large Philips factory at Eindhoven in the Netherlands¹ was compelled early in 1930 to dismiss 3,000 workers in order to reduce output. During the whole of 1930 the number of workers remained about 19,000, but towards the end of January 1931 the restriction of markets brought the management face to face with the alternative of dismissing another 1,500 workers or reducing the hours of work to forty-two in a number of departments. Since the engagement and training of a worker cost the factory a few hundred florins, it was considered in the interests of the works to maintain stability of employment as far as possible, and to keep men whose engagement was expensive and who might be required again. The management therefore chose the second alternative. Three weeks later it had to go even further, so as to avoid dismissing another 500 workers, and reduced the weekly hours of work to forty in certain shops. At the same time, in order not to cut down the earnings of these workers unduly, it decided to pay them until further notice the wages corresponding to forty-two hours of work, thus making the undertaking itself responsible for the time being for the cost of the reduction.

The chief aim of the Philips factory was to maintain the staff which it had engaged at Eindhoven. It is true that this policy did not prevent the mass recruiting during the period for 1928 to 1929, when the undertaking was expanding rapidly, from being followed by drastic cuts in 1930. But the management, which frankly recognised the social disadvantages of these sudden changes, points out that it is particularly difficult to avoid them in new industries because a producer can hardly estimate in advance the limits of his market. For this reason the departments at Eindhoven which are most seriously affected are those for the production of wireless appliances and valves, and not the departments for the manufacture of electric bulbs for which the market is older and better known, so that production can be kept stable².

Building Industry

In the German calcareous sandstone industry hours have been reduced to forty in the week by agreement between the parties concerned. Each undertaking guarantees to increase its staff in proportion to the reduction in hours. A certain number of unem-

¹ INTERNATIONAL LABOUR OFFICE: *Studies on Industrial Relations*, II, Studies and Reports, Series A, No. 35. Geneva, 1932.

² Communication to the International Labour Office, Nov. 1932.

ployed have also been found work in the German cement industry, where several undertakings have adopted the forty-hour week ¹.

In the United States, the San Francisco Building Association ² adopted the five-day week in 1930 with a view to reducing unemployment, and it is intended to maintain these reduced hours. When it proves necessary to work on Saturdays overtime rates are paid.

Salaried Employees

As for manual workers, the hours of work for salaried employees in industrial and commercial undertakings have often been reduced with a view to engaging additional employees or avoiding dismissals.

In the Berlin metal industry ³ an agreement was concluded on 1 February 1931 with the various employees' organisations, under which the employer may reduce the hours of all or part of his staff down to forty in the week. It was suggested that the number of working days should be reduced rather than the daily hours of work. Salaries will then be reduced by 0.45 per cent. for every hour not worked, up to a maximum of 15 per cent. of the monthly salary, but no reduction will be made in family allowances where they exist. Before reduced hours are introduced the employees' representatives must be consulted and sufficient notice must be given.

The important American motor-car factory, the General Motors Corporation ⁴, decided to put its central office workers in New York and Detroit on a five-day week as from 1 October 1932 and the working week was reduced to forty hours. The shorter week applies to between 10,000 and 15,000 salaried employees and may be extended to the office staff of the company in other cities. The measure has not been accompanied by a fall in salaries, but it should be observed that the salaries of the office staff were reduced by 10 to 20 per cent. on 1 October 1931, that is to say, before the forty-hour week was introduced. The adoption of the five-day week is expected to lead to an increase in the number of employees in certain departments.

A large Pennsylvania department store has reduced the hours of its employees from forty-five and a half to forty-two per week as a means of avoiding dismissals. Each employee works five days per week. On the other hand the hours during which the

¹ *Industrial and Labour Information*, Vol. XL, p. 216.

² *New York Times*, 22 Dec. 1930

³ *Reichsarbeitsblatt*, 1931, No. 10.

⁴ *Industrial and Labour Information*, Vol. XLIV, p. 173.

store is open have been extended for the greater convenience of shoppers. Two Los Angeles department stores have adopted a similar system of rotation of staff on the basis of a five-day week of forty hours ¹.

A large bank has reduced hours, using different methods for its different departments. In the clearing house, mail transmissions, etc., departments employees work five days in the week, while heads of departments, specialists, etc., work six days, but receive a holiday without pay of one week out of six or one month out of six. These measures have made it possible to increase the number of employees ².

Postal, Telegraph and Telephone Service

An agreement was recently concluded between the central association of salaried employees and the General Directorate of the Berlin Post Office ³, introducing the Krümper system previously described as a means of avoiding the dismissal of several hundred auxiliary women employees. During November and December 1932 and January 1933 these employees will be given a holiday of seven days every seven weeks, which will not be reckoned as an interruption of service, so that their rights as fixed by collective agreement remain untouched.

Hotels and Restaurants

An agreement has recently been concluded for the Province of Milan in Italy between the Federation of Commercial Unions and the Commercial Federation ⁴, with a view to combating unemployment. Under the agreement, which covers about 9,000 employees in restaurants, hotels and boarding houses in the Province, the employers undertake not to reduce the staff below the figure in their employment on 1 October 1932. From 15 October 1932 to 31 March 1933, the waiters in hotels and boarding houses will alternate on a system of weekly rotation with those at present out of work. The employees in restaurants are given a special holiday of twelve days without pay and must be replaced by unemployed workers. The Commercial Federation will request employers to give a twelve days' holiday without pay to the staff of hotels and boarding houses and to engage unemployed persons

¹ SHARE-THE-WORK MOVEMENT, *op. cit.*

² *Ibid.*

³ *Vorwärts*, 29 Sept. 1932.

⁴ *Il Lavoro Fascista*, 1 Oct. 1932.

in their place. Between 15 October 1932 and 31 March 1933 persons who have completed a year's service in hotels and restaurants and have a contractual right to a holiday will be given their holiday without the allowance to which they are entitled under the contracts of the employment in force, and will be replaced by unemployed persons. The provisions concerning the rotation of staff and holidays do not apply to chefs, head waiters, and persons in similar positions. The additional staff needed to carry out these provisions is to be obtained through the employment exchange for commercial employees. Special joint committees are set up to watch over the strict observance of the agreement and to make inspections.

* * *

Although limited to the more typical cases with which the Office is acquainted, the above examples show the variety of industrial and commercial undertakings in which hours of work have been reduced: mines, food, chemicals, petroleum, rubber, tobacco, paper and printing, textiles, engineering, building, glass works, post, telegraph and telephone, shops, offices, banks, hotels and restaurants. The introduction of new rationalised methods in certain industries where technical developments are making important progress, such as the chemical, glass, and cigarette industries, has also facilitated the reduction of working hours.

Within a particular undertaking, hours have generally been reduced for the whole of the staff; sometimes however the reduction has applied only to part of the staff. In one case it may be the services where wholesale dismissals were becoming imminent on account of economic depression. In another, it may be the services where the work is carried out under difficult conditions (heat, humidity, etc.); and in yet another, the reduction may apply to the specially skilled staff, the management finding it to its interest to keep such workers, even if only on short time, owing to the high cost of their training.

These measures of the redistribution of employment have applied to workers, salaried employees and sometimes even, though more rarely, to the higher officials of the undertaking.

For continuous work, hours have been reduced to forty-two or thirty-six in the week by the adoption of the system of four six-hour shifts, or to forty in the week by the introduction of a system of rotation. For discontinuous work, hours have been fixed as a rule at forty in the week, usually spread over five days.

The percentage of the workers it has been possible to re-engage in consequence of the reduction of hours varies with the undertaking. The most favourable examples show an increase of 25 to $33\frac{1}{3}$ per cent. for continuous work and of about 15 to 20 per cent. for discontinuous work.

Often the reduction of hours has been accompanied by a proportionate reduction of wages. Several examples show, however, that attempts have been made not to reduce wages below a certain minimum. The reduction of hours may have been partially compensated by the introduction of a new system of remuneration with bonuses giving the worker an incentive to increase his output; the workers' total income may have been increased by the engagement of several members of the same family, some of whom were unemployed; earnings may have been partially compensated by payment for a larger number of hours than those actually worked; finally, the workers with the lowest wages may have been transferred to the best remunerated shift. Several undertakings have even decided to maintain the former weekly or monthly earnings of the whole of their staff. In some cases wages falling below a specified weekly, monthly or annual figure have not been reduced; in others, the workers earning least are employed for a longer period than the rest of the staff. In general, it is the basic rates that have been reduced and family and other allowances have been left untouched. When the reduction of hours affects several consecutive days the workers may have been given, by way of compensation for the time they are laid off, part or all of the allowance to which they would have been entitled for their annual holiday. In order to safeguard stability of employment, one undertaking has decided to pay its staff a fixed wage throughout the year; when business is slack the workers earn more than the sum corresponding to the number of hours actually worked, and the difference is made up during the busy season.

In certain undertakings, in particular in those which have been rationalised, the reduction of hours has allowed of an increase in staff while the cost of production remains unchanged. Sometimes the satisfactory results obtained in one department of an undertaking have encouraged the management to make the measure general. Finally, some undertakings are considering the possibility of making the reduction of hours a permanent measure.

Although, as has been seen, private initiative taken spontaneously or in consequence of Government encouragement has led to the reduction of hours in a number of undertakings, there are still many which have taken no action of this kind and would yet be in a position to contribute to this form of relieving unemployment. Experience shows that private initiative cannot be expected to make the forty-hour week general. Its establishment by way of agreement between employers and workers is also difficult, for in that case the parties must agree both on the methods of application and on the principle. Similarly, Government encouragement, when not reinforced by sanctions, is insufficient for a general application of shorter working hours. In brief, in all these cases action depends on the good-will of employers and therefore must inevitably be incomplete, since many employers hesitate to undertake a reduction of hours unless their competitors adopt the same measure at the same time. It therefore becomes impossible on these lines to secure the wide adoption of the practice. This result can be obtained only by appropriate legislative action undertaken in the near future in the different countries, action which will prove all the more effective if it has been concerted in advance.

CHAPTER V

POSSIBILITIES OF INTERNATIONAL REGULATION

The information contained in previous Chapters permits certain conclusions to be drawn as to the practical possibility of reducing hours of work and the result which might be expected to follow. The main conclusion would appear to be that, on the whole, a general reduction of working hours would necessarily tend to increase the volume of employment, more particularly when economic recovery begins to make itself felt. The present report shows that, in point of fact, hours have been reduced in a considerable number of establishments in different countries, with a view to preventing the dismissal of workpeople or in order to enable a larger number of workpeople to be employed. These measures have more usually taken the form of organised short time in view of the economic depression, but in some instances working hours have been permanently reduced in a number of establishments, without apparently reducing their productive capacity.

Can such measures be generalised? The opinion of several statesmen is in the affirmative. For instance, Mr. Benes last year and Mr. Herriot this year expressed the view that the reduction of hours of work should be brought about by international agreement. The same view is implied in the proposal of Mr. de Michelis, who suggested that any further diminution of unemployment through a reduction of hours of work would depend on the conclusion of international agreements which would guarantee national industries against foreign competition. It was in these circumstances that the Governing Body decided to convene the Preparatory Conference.

This decision of the Governing Body implies that the Office should undertake the preparation of the Conference, and it may be useful at this stage to distinguish the respective tasks of the Office and of the Conference.

In the first place, it was the duty of the Office to collect the facts bearing on the question and, in particular, those relating to such experiments as have been made. These facts have been summarised in the preceding Chapters. It is for the Conference to examine

them and to see whether it has any further information to supply.

In the second place, given the necessity of seeking to generalise these experiments, the Office proposes to attempt in the present Chapter to submit to the Conference a scheme for the international application of what it judges to be the most suitable means. It has set out to draft a scheme which would be practically possible from the technical standpoint and which, if adopted by the different countries, would give them the necessary guarantees. It will be the task of the Conference to examine this scheme; to say whether it considers that it is technically workable; to say whether it considers that, if adopted, the scheme would give the necessary international guarantees; and lastly, to say whether such a scheme would be likely to command general acceptance.

In its examination the Conference will no doubt bear constantly in mind that, important as the economic aspects of the problem are, and difficult as its solution may prove, it is impossible to ignore the grave social consequences involved in prolonged and widespread unemployment. Unless some method can be found of restoring to gainful activity the greater proportion of those who are now involuntarily idle, no solution of the economic and financial questions which have combined to produce the crisis can be regarded as satisfactory. As is emphasised in Chapter I, the fact that a considerable proportion of the industrial population is deprived of purchasing power and exposed to the demoralisation which unemployment produces is bound to have serious economic repercussions. This appears to be the central feature of the present situation which must underlie any consideration of the problem now under discussion.

§ 1. — General Lines of International Regulation

The first question which inevitably arises is whether any system of international regulation, with a view to reducing working hours, should be *permanent in character or temporary and provisional*. This question can, no doubt, be approached from two different points of view.

On the one hand, it is argued that it would be possible by means of a temporary agreement to effect an immediate and substantial reduction in the present volume of unemployment: when unemployment dropped to a normal level, the agreement would automatically become inoperative.

On the other hand, it is maintained that, even when a considerable

recovery of industrial activity has taken place, unemployment will be found not to diminish to the same extent, and that, in order to prevent a large proportion of the industrial population remaining idle, it will still be necessary to retain the shorter working week. This forecast is based on the considerable changes which have taken place in methods of production, and which have given rise to what is known as "technological unemployment". In so far as unemployment due to this cause continues to exist, a reduction of working hours ought surely to be maintained, at least partially, in order to meet it. As has already been pointed out in Chapter II, it may happen that in a certain number of industries the revival of business will not make it possible to re-employ the number of workers previously employed in them. In order to produce the quantity of goods necessary to satisfy the demand in a period of normal prosperity, a smaller number of workers would probably suffice, in view of the increased quantity of machines employed and the application of methods of work which secure an economy of labour.

If, as there is reason to think, such should prove to be the case, the volume of unemployment will be greater than that which existed before the crisis, since, in order to obtain the increase of production required by the recovery of industrial activity, there will be a tendency simply to prolong the hours of work of those who were previously working on a reduced schedule, and thus to re-engage as small a number of additional workers as possible.

It seems impossible to give any definite reply in favour of the one or other of these theses at the present time. All that can be said for the moment is that any regulation for reducing working hours should last as long as the unemployment situation renders it necessary. It will be particularly necessary that any such regulation should be still in force when recovery, even though partial in character, begins to swell the number and the volume of orders, in order that employers profiting from them shall have recourse to the engagement of a larger working force instead of simply prolonging the shortened working hours which were in operation up to that time. In this way those who are at present without employment could be reabsorbed into production by retaining the shortened working week.

It has been suggested that a Convention might be framed which would cease to operate automatically whenever unemployment fell to a certain level. The difficulties of working such a system, however, or of devising the criteria by which it could be applied,

seem to preclude it as a practical proposition, and it would clearly be impossible that each State should be allowed to apply such criteria itself and take its own decision as to the moment at which its obligations had ceased. For the abrogation of the Convention some general agreement among the contracting parties would therefore be necessary. Since such agreement would be necessary, there would be no point in having recourse to any special system involving the application of criteria which would be difficult to devise and complicated to operate. If at the end of a certain period it was found that the Convention was no longer required, it would always be open to any of the parties to propose its abrogation, and if there was general agreement the desired result could be secured by the application of the usual procedure of the Organisation.

It has also been suggested in various quarters that a network of *special Conventions*, applying each to a specified industry or group of industries, should be considered. Others have advocated a *single general Convention* which would apply to all undertakings. It must be recognised that the first suggestion has this advantage over the second that the regulations could be drawn up so as to meet more exactly the special requirements of each industry. This method would amount to the adoption of Conventions similar to the one adopted for coal mines and to the one at present under consideration for glass works. There are, however, two obstacles in the way of adopting this method: first, that it will be difficult to define the limits of industries internationally, and secondly—a reason not without importance—that several years would certainly elapse before an adequate number of industries would be covered, and consequently before any considerable number of wage earners could be re-engaged as a result of these separate Conventions.

Assuming, then, that it is thought desirable to attempt to regulate hours of work by means of a general Convention, the next question which falls to be considered is the *type of Convention* which should be adopted to meet the special circumstances in view.

On the one hand, it would be possible to draw up a *rigid Convention* conceived on the general lines of the existing Conventions

on hours of work. Such a Convention would fix a daily maximum of hours of work and a weekly maximum of, say, forty hours per week, and would only allow such exceptions as were indispensable to meet cases in which it was impossible to apply these limits.

The effect of such a Convention would be to substitute a new Convention for the existing Conventions on hours of work, and to revise the whole basis on which the present system of hours of work rests internationally. This, however, is not the task for which the Conference has been convened.

The Washington Convention, which served as the model for subsequent Conventions on hours of work, was drawn up in particular to guarantee to the worker leisure sufficient for his family, civic and cultural needs. The object of the international regulation at present under discussion is totally different.

The Washington Convention was an end in itself. The regulation of hours of work which is now being considered is a means to another and quite different objective, viz. the diminution of unemployment. Thus, whereas in the former case the system of regulation had to be of as rigid a character as the technical difficulties of industry would allow, the scheme of regulation in the present case should rather provide for the maximum of elasticity, so that its provisions may not constitute any impediment to the fullest attainment of its objective.

In the present instance, moreover, the International Labour Organisation is not being asked to sanction internationally a reduction of working hours already introduced into the legislation of a considerable number of countries, and thus to consolidate a measure of social progress which is already largely in operation. The object is rather to second the efforts of the various countries to diminish unemployment by means of a reduction in working hours, by eliminating the obstacles which national action without any international co-ordination might encounter. In order to meet this requirement, a rather different type of Convention may perhaps be conceived. In the present circumstances, the duty of the Office appears to be to examine the various methods which have been already tried in practice or suggested as a means of securing the re-employment of those who are now out of work, and to draft a scheme which would permit of the general application of those methods.

§ 2. — Non-Rigid Type of Convention

As the object to be attained is not to afford the social protection of shorter hours by reducing the time during which the undertaking is run, but to make it possible to increase the number of workers employed by reducing individual hours of work, a more elastic system than that of the Washington Convention should be aimed at, containing provisions which, while giving effect to the new international limitation of working time, would be based on methods of distributing and organising work different from those laid down in the existing Conventions.

At the same time, it must be ensured that any attempts made to attain the object in view in the new international regulation do not have the effect of diminishing the social protection conferred on the workers by the existing Conventions. It will accordingly be essential, if this social protection is to be maintained, to have provisions requiring certain limitations laid down in these Conventions to be adhered to.

Having regard to these considerations an endeavour is made below to see how an elastic Convention could be based on methods by which new openings of employment could be created.

To begin with, the Convention should lay down the principle that average hours of work in the week are to be limited to a specified maximum, which must of course be lower than that specified in the existing Conventions.

Effect in practice can be given to this average by different methods of organising and distributing hours of work.

Some of these methods which have been tested by experience necessarily imply that average hours of work are calculated over certain periods of time, which are of different lengths. This is the case, for instance, with all rotation systems, whether they apply to isolated individuals or to groups. If, as is generally the case, these systems are based on a period longer than the week, the resultant weekly average of hours of work should not exceed the weekly average maximum which is laid down.

In the operation of these systems, however, two things must be avoided. The system must not cover a very extensive period which would allow very long hours to be worked during a portion of the period, subject to shorter hours being worked later in order to keep within the average, as in such a case the workers might lose the benefit of the later portion of the period if they were dismissed

before that portion began; and too long working days or working weeks should not be allowed for the purpose of calculating the averages.

When work is organised by shifts, hours of work are usually spread over a period of three or four weeks. But a longer period has sometimes to be taken (three months, six months or even a year) when use is made of certain methods of rotation by which different portions of the staff of an undertaking are employed in turn. For this reason it would appear that a year should be the maximum period to be taken as the basis for calculating the average, this period to be used only in very exceptional cases.

Further, if the numbers of hours of work in the day and in the week which are taken into account in calculating the average were not limited, it might well happen in certain cases that they would be so high as to produce serious physiological effects on the workers. But, as has already been suggested, there can be no question of endeavouring to attain the object in view at the expense of the protection already conferred on the workers by the existing Conventions on hours of work. These Conventions lay down maxima which should be adhered to in all circumstances. It should accordingly be made clear that hours of work in the day or in the week are not, unless exceptions are specified, to exceed the daily or weekly maxima laid down respectively by each of the existing Conventions.

Before proceeding to consider the way in which certain of the methods analysed in Chapter III could be made the basis of an international agreement, it will be desirable to deal first with the special case of continuous processes, i.e. of work which by reason of its nature has to be carried on by a succession of shifts covering the whole of the twenty-four hours. The conditions here are such that the possibility of a choice of methods is necessarily limited and special provision for this kind of work must therefore be made.

In this special case, workers engaged in the work in question could be employed according to two distinct methods. With the one method, the necessary continuity would be ensured on work-days and Sundays solely by a succession of shifts each of which would have its working time reduced so as to allow an extra shift to be worked each day. Thus four six-hour shifts in the day could be substituted for three eight-hour shifts. With the other method, continuity would be ensured by a rotation system spread over a period longer than twenty-four hours and worked with shifts for which hours of work would remain the same as before. In this

case, there would be four eight-hour shifts spread over thirty-two hours instead of three eight-hour shifts spread over twenty-four. It has been seen in Chapters III and IV that the first of these methods is usually preferred.

Consideration can now be given to industries and occupations which are not continuous in the above sense, and here the general considerations to which attention has been drawn apply.

In those in which work is organised in shifts but which are not operated continuously, the appropriate method would be some adequate arrangement of the shifts in one or other of the various possible forms which have been referred to in Chapter III.

Where work is carried on in a single shift, the daily or weekly maximum could be strictly applied, or a rotation system could be adopted worked over a number of weeks, subject always of course to compliance with the average to be laid down.

For these industries two types of rotation system should be considered.

In the one case, such rotation as is necessary could be based on a relatively short period and would involve giving certain time off from work to individual workers or groups of workers in turn. This case could be met simply by fixing four weeks as the maximum period for the operation of the rotation system.

The other case refers to undertakings which grant their workers paid holidays, or which might wish to use the system of paid holidays in order to contribute to a redistribution of work over a larger number of workers. The practice of paid holidays clearly allows opportunities for re-engaging fresh workers to make up for the working time represented by the holidays taken. It would not, however, be sufficient in itself to give full effect to a general reduction of hours of work such as should be considered for the purposes of this report, because this would require annual holidays to be granted of a length which could not reasonably be expected. For instance, in order to make up a general reduction of eight working hours in the week ($48-40 = 8$), annual holidays of fifty-two working days would have to be given. All the same, annual paid holidays could be brought into the scheme of a general reduction of hours of work for the purpose of creating fresh openings of employment. Thus the working time represented by such holidays could be taken into account in applying an average shorter working week in the undertaking concerned. Moreover, as these holidays are usually granted on the basis of a year, it would be reasonable, in cases where they were so taken into account in working out the average

working week, to allow a year to be taken as the basis for this purpose. Thus a rotation system whereby workers took off one working day per fortnight could be applied during part of the year with annual holidays granted in rotation to the workers during certain other months, in such a way as to conform over the year as a whole with the average laid down¹. It should not be overlooked in this connection that, if paid holidays are not to be reckoned in the average working week, it might happen that an employer who had been granting them and had thus helped to reduce unemployment might be tempted, when faced with his new obligations, to go back on his previous practice in regard to holidays. It may be added that the period to be covered by such a rotation system as is referred to above might be confined to a certain part of the year, e.g. a particular season, when annual holidays are given during the summer months.

It is clear, however, that still other methods may be conceived which would be more suitable for particular categories of undertakings or of workers. It would be advisable that allowance should be made for such methods, provided that the decision to apply them is taken in pursuance of co-operation between the parties concerned resulting in the conclusion of collective agreements, and that the average maximum is adhered to.

The important part played in national life by collective agreements worked out by employers' and workers' organisations needs no emphasis. The collective agreement gives the workers better safeguards than individual contracts of employment; being more elastic than a statutory enactment, it is more easily adaptable to the needs of industry; and, moreover, as it has a limited duration, it can be changed, cancelled, or replaced by another agreement without too much difficulty. It thus meets the requirement of security and elasticity. It has accordingly become the medium *par excellence* for regulating working conditions, and in particular hours of work. It has been used on a number of occasions for putting into operation a forty or thirty-six hour week.

This medium has produced such good results that, with the industrial developments which have taken place in a considerable number of countries, the State has taken action to facilitate the conclusion of collective agreements. In some countries, the State simply lends its good offices to the parties through the intermediary

¹ Cf. similar case referred to on p. 88.

of certain conciliation or mediating bodies; in others it offers the parties a special procedure which ends in a conciliation formula being submitted to them which may serve as a basis for a collective agreement, or may directly take the form of such an agreement if it is adopted by them. Under the legislation in force in some countries, the organisation of employers or workers concerned may, in virtue of a special arbitration procedure in the course of which both sides argue their cases, have an award imposed on them which they are obliged to accept but which operates as a collective agreement.

In the light of these considerations, it would seem desirable that use should be made of a medium which can render such substantial services in any international agreement for the purposes at present in view. Previous Conventions, in fact, have already done so. The Washington Convention, for example, authorises certain exceptions to the eight-hour day rule if they are accepted by collective agreement. Such collective agreements could, where possible, be made the basis for the application of the methods which have been considered for inclusion in a new Convention on the reduction of hours of work. By this means the parties concerned could be given the opportunity to select the method of reducing hours of work which would best suit the particular circumstances of the industry or occupation concerned, any local differences in different parts of the country and even the special requirements of a private undertaking. This medium could also be used by the parties to regulate the various subsidiary questions which might have been dealt with in the international Convention.

Provision might accordingly be made authorising the reduction of hours of work by means of collective agreements or authoritative decisions assimilated to collective agreements, provided that this procedure was regulated by a general statutory enactment or that the agreements were approved by an act of public authority.

It has also been suggested that international collective agreements could be used for the same purpose. It would appear that this method could not be incorporated in an international Convention, which by its nature can only impose national obligations and can accordingly only deal with national measures of application. There is no question, however, that in so far as international collective agreements could be negotiated they would help to make national collective agreements uniform and could facilitate the application of an international Convention.

The preceding considerations will perhaps suffice to indicate the type of elastic Convention which the Office has in mind and which would thus be clearly distinguishable from what has been called earlier in this Chapter a "rigid" type of Convention.

FIGURE FOR THE WEEKLY MAXIMUM

Up to the present two general weekly maxima of hours of work have been generally envisaged—the forty-hour week and the thirty-six-hour week. Any figure which does not go as low as forty hours would hardly be desirable, as its possible effects on the volume of unemployment would be small. On the other hand, a general reduction of the working week to thirty-six hours would have very serious consequences for the employer if wages had to be kept at the previous level, and for the worker if his wages had to be cut in proportion to the cut in hours of work. It must not be overlooked either that the new maximum of hours of work should apply to undertakings which, to some extent at any rate, are still running full time, and that a cut in hours of work from forty-eight to thirty-six would on the whole be a far-reaching change in their working conditions. Besides, the forty-hour week would affect the internal organisation of undertakings less than the thirty-six-hour week, because the eight hours cut in the individual worker's working week would be exactly equal to an ordinary working day under present conditions.

It is for the Conference to select the maximum which it considers the most suitable. For the reasons given above and in the light of the experiments which have been carried out, it would appear that the forty-hour maximum is preferable as a practical proposition.

In the case of work which is required by reason of its nature to be carried on continuously by a succession of shifts, though a weekly average of forty hours can be obtained by the employment of auxiliary shifts or of reliefs, it is by no means certain that shift or relief systems can be found which would meet the requirements of rational organisation of the work. If a special regime is to be allowed for such work, and a special regime would seem justified in this case, it will be necessary to make provision, by way of an exception, for an average weekly maximum of forty-two hours, so that work can be organised in four six-hour shifts in the day, or in four eight-hour shifts, one of which would in turn not be included in the daily schedule.

EXCEPTIONS FOR OVERTIME AND EXTRA TIME

Whatever methods are preferred for applying the shorter working week, some allowance will have to be made for overtime.

It has been found during the depression that, although in the aggregate the number of hours of overtime worked has very substantially diminished, nevertheless the amount of overtime per head averaged over the workers who actually worked overtime has not been reduced to the same extent. At any rate, that seems to be the deduction to be drawn from the Belgian and Czechoslovak statistics on the subject.

So far as commercial overtime is concerned, however, it seems clear that the adoption of systems of rotation or of extra shifts such as have been suggested in the preceding pages would allow for a certain amount of elasticity in the operation of a number of undertakings and to this extent would make overtime less necessary than hitherto. This would be the case in particular with seasonal industries. In such industries a forty-eight-hour week could be worked during the busy period of the year and an average of forty hours a week for the whole year could still be achieved by reducing hours of work proportionately during the slack period.

All the same, there will still be cases in which commercial overtime is unavoidable. Where this has to be worked it is an almost universal practice that, as laid down in the existing Conventions, the hours worked in excess of the ordinary working time should be remunerated at not less than one and a quarter times the normal rate of pay. A provision to this effect should no doubt be included in the Convention under discussion, which might also stipulate for increasing this rate progressively in certain circumstances.

In addition, some further provision might be made analogous to the express limitation of commercial overtime stipulated in the Convention on hours of work in coal mines. A general limitation might be laid down applicable to all industries, or it might be stipulated that a maximum number of overtime hours should be fixed for each industry or class of industry by public authority subject to a general maximum. Of these hours either the whole number might be put at the free disposal of the employer, or alternatively a certain proportion only, the remainder not being utilisable until the permission of public authority had been obtained. As the requirements of different industries vary considerably, it may even be desirable to allow for a still further method of regulating overtime, namely, agreement between the employers' and workers'

organisations concerned. In a Convention aiming at permitting as large a measure of flexibility as is consistent with the object in view, all these methods might be provided for, the choice between them being left to the parties concerned.

In any event, it would seem essential to fix some absolute maximum of commercial overtime in the Convention itself: otherwise there would be no international guarantee of uniformity such as is required in view of trade competition. Moreover, whatever system of regulating overtime is contemplated, it should be so conceived as to ensure that systematic overtime is not allowed to such an extent that the object of the Convention as a whole, the engagement of fresh workers, would be very largely negatived.

It may be added that special provision would have to be made for cases of accident, actual or threatened, of urgent work to be done to machinery or plant, and of *force majeure*, as, if no allowance is made for extra time in these cases, the running of the undertaking would be stopped or its ordinary working be seriously interfered with. Provision would also have to be made for permitting longer hours in order to meet purely technical requirements, for preparatory or complementary work which must necessarily be carried on outside the limits laid down for the general working of an establishment, and also for certain classes of workers whose work is essentially intermittent. Exceptions in these cases are allowed in the Washington Convention and should no doubt be provided for in the new Convention.

SCOPE

General Criterion

The foregoing pages having indicated what might be the contents of a Convention of an elastic type by which re-employment should be promoted and the necessary guarantees given to the different countries, it remains now to consider how the scope of the Convention might be defined, and, in the first place, what criterion might be adopted for this purpose. Should the scope of the Convention be defined with reference to undertakings or establishments or with reference to the persons employed—manual workers and salaried employees? It would appear that undertakings or establishments should be taken as the basis, and that the Convention should apply comprehensively to all persons employed in those which are to be included. The discussions which took place previous to the adoption of the Convention applicable to commerce and offices

showed the impossibility of formulating an international definition of the expression "salaried employee" which would be generally acceptable, and it would accordingly hardly be possible to use for defining the scope of the new Convention a criterion based on the distinction between manual workers and salaried employees.

Industrial Undertakings

So far as concerns the undertakings or establishments to be included in the scope, it seems clear that the Convention should apply to industrial undertakings as defined in the Washington Convention on hours of work¹. The Convention would thus cover both public or private undertakings, but those in which only members of the employer's family are employed would be exempted.

This exemption, however, though it would automatically exclude a certain number of small undertakings from the scope of the Convention at present under consideration, would probably not go far enough. In the case of the Washington Convention, there was no theoretical or practical reason why workers in small undertakings merely as such should not have the benefit of the protection it set out to confer as much as workers in large undertakings. But in the special case under consideration, the object in view, viz. to promote the employment of fresh workers by reducing individual working hours, cannot easily be attained in undertakings generally employing only a small number of workers. The possibilities of applying a rotation system presume a certain organisation of work which is not generally found in small undertakings. It may accordingly be desirable to exempt from the new Convention undertakings

¹ Article 1 of the Washington Convention defines industrial undertakings for the purpose of the Convention as including

- " (a) Mines, quarries, and other works for the extraction of minerals from the earth.
- " (b) Industries in which articles manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished, or in which materials are transformed; including shipbuilding and the generation, transformation, and transmission of electricity or motive power of any kind.
- " (c) Construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbour, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gas work, waterwork or other work of construction, as well as the preparation for or laying the foundations of any such work or structure.
- " (d) Transport of passengers or goods by road, rail, sea or inland waterway, including the handling of goods at docks, quays, wharves or warehouses, but excluding transport by hand."

usually employing less than a certain number of workers, and the figure which might be taken into account might be ten workers, which was the figure fixed in the earlier regulations issued in Germany in view of the difficulties referred to above.

For the rest, provision would also have to be made for exempting certain categories of persons employed in industrial undertakings, as is done in the Washington Convention. Persons holding positions of management, for example, would have to be excluded, and the same rule should no doubt apply to persons holding positions of supervision or employed in a confidential capacity. But it would be desirable to keep the number of persons thus excluded down to a small proportion of the workers in the undertaking, in order to safeguard the special object of the new Convention, and a limitation of this kind might be provided for.

Commercial Undertakings

The question then arises whether the Convention should apply only to industrial undertakings or also to commercial and similar establishments. The inclusion of these establishments in the Convention has been urged in various quarters on the grounds that in view of the large amount of unemployment at present prevailing among commercial employees measures should be taken to ensure a redistribution of employment in the establishments in question. It has been pointed out, however, that the output of many salaried employees is not so closely bound up with the length of working hours as in the case of manual workers; to shorten their working hours would not necessarily involve a proportionate diminution in their output; for example, those employees who could not adapt themselves to quicker work might be tempted to do unpaid overtime on their own, and this would be indirectly lowering salary rates and living conditions. For these reasons it is doubted whether a shortening of hours of work in commercial and similar establishments would have the desired effect on re-employment, especially as there are still very considerable openings for rationalisation in these fields of employment. Hence, too, the tendency among salaried employees' organisations to adopt a waiting and hesitating attitude towards the question of the shorter working week, which is considered essential by industrial workers.

In view of these considerations it would appear advisable not to treat the question of reducing working hours in commerce

in too close conjunction with the same question for industrial undertakings, by including both categories of establishments in a single Convention, as such inclusion might create considerable difficulties in the way of ratification. If an international Convention for promoting fresh employment in commercial and similar establishments is to be framed, it should rather take the form of a separate instrument. Moreover, this procedure would be all the more desirable in view of certain special features of work in these establishments and of the fact that the regulations for such establishments would accordingly differ, on a number of points, from those which have been outlined in the preceding pages and which have been tacitly conceived with reference to industry.

In commercial and similar establishments, for example, work which by its nature has to be carried on continuously is exceptional, while, on the other hand, the shift system could be adopted on a very wide scale in those establishments which have to remain open for long hours to serve customers. Again, though probably it would rarely be possible to cut down the number of days in the week on which work is done, there would be much more scope for the institution of a shorter working day. Further, rotation systems could be more easily applied than in industry, because the paid holidays which salaried employees are accorded are generally longer than those granted to manual workers. It might also be desirable to consider whether a maximum working week of forty-two hours, which would allow of a seven-hour day, would not be preferable, so as to permit the extension of the system of two shifts in the day.

Similarly, some adjustment would be required in the exceptions for overtime and extra time. In addition to those already considered with reference to industry, provision should be made for exceptions in order to allow for special work such as stocktaking and the preparation of balance sheets, settlement days, liquidations, and the balancing and closing of accounts.

As regards the scope of a separate Convention for commercial establishments, it would seem that this should be defined on the same lines as in the Convention concerning hours of work in commerce and offices adopted by the Conference in 1930¹.

¹ Article 1 of the 1930 Convention defines its scope as applying to persons employed in the following establishments:

- “(a) commercial or trading establishments, including postal, telegraphic and telephone services and commercial or trading branches of any other establishments;
- “(b) establishments and administrative services in which the persons employed are mainly engaged in office work;

In addition, however, to the exemptions from this scope stipulated by the 1930 Convention in respect of certain classes of establishments or of persons, it would probably be desirable to provide for a special exemption for establishments employing only a small number of workers, as has already been suggested for industry. In the case of the exception for persons holding positions of management or employed in a confidential capacity, it would appear essential, in view of the danger of this expression being interpreted in a much wider sense in commerce and offices than in industry, to stipulate expressly in the separate Convention that the application of this exception is in any event to be limited to a low percentage of the workers employed in the establishment.

SPECIAL REGIMES FOR CERTAIN EXTRA-EUROPEAN COUNTRIES

The Washington Convention on hours of work in industrial undertakings does not apply to China, Persia or Siam, and includes special provisions which still hold good for British India and Japan. For India, the maximum working week is fixed by the Convention at sixty hours and for Japan at fifty-seven hours (sixty hours in the raw silk industry, forty-eight hours for persons under sixteen years after 1 July 1925, and for all miners of whatever age engaged in underground work in the mines). If the new Convention laid down an average weekly maximum of forty hours, the Conference should no doubt consider what the reduced weekly maximum should be for these extra-European countries.

“(c) mixed commercial and industrial establishments, unless they are deemed to be industrial establishments;”

and as not applying to persons employed in the establishments (a), (b) and (c) below and leaving it open to the competent authorities to exempt establishments in (d) and (e) below:

- “(a) establishments for the treatment or the care of the sick, infirm, destitute, or mentally unfit;
- “(b) hotels, restaurants, boarding-houses, clubs, cafés and other refreshment houses;
- “(c) theatres and places of public amusement;
- “(d) establishments in which only members of the employer's family are employed;
- “(e) offices in which the staff is engaged in connection with the administration of public authority.”

But persons employed in branches of the establishments excluded under (a), (b) and (c) above are to be included in cases where such branches would, if they were independent undertakings, be included among the establishments in which the Convention applies.

SUMMARISED OUTLINE OF A POSSIBLE CONVENTION

The preceding pages indicate what would appear to be the main provisions for a scheme of international regulation so far as its technical aspect is concerned. Below a short outline is given of the bases on which a Convention might be framed which would apply only to industry:

(1) The Convention would apply to the undertakings covered by the existing Convention limiting hours of work in industrial undertakings, excluding undertakings employing less than ten workers.

The provisions would apply to all persons employed in the undertakings covered, excluding persons holding positions of management or supervision or employed in a confidential capacity. It would perhaps be desirable to limit the number of persons thus excluded to a certain percentage of the workers employed in the undertaking.

(2) The Convention would lay down an average working week of forty hours. In the special case of work which necessarily has to be carried on continuously the average working week might be fixed at forty-two hours.

As a general rule, the average week should be calculated over a short period, for example four weeks. In exceptional cases the calculation could cover a longer period, which in any case should not exceed a year. In any event, the maximum working day and working week should not exceed the limits laid down in Articles 2 and 4 of the existing Convention applicable to industrial undertakings and in Articles 3, 5, 13 and 14 of the existing Draft Convention applicable to coal mines.

The average working week could be arrived at by one or more of the following methods, according to circumstances:

- (a) increasing the number of shifts and, in particular, applying the four six-hour shift system for work which necessarily has to be carried on continuously;
- (b) adequately arranging the shifts for other work carried on in multiple shifts;
- (c) reducing weekly hours of work by shortening the working day or cutting down the number of work days in the week, or organising rotation systems, for work carried on in a single shift;

- (d) taking into account hours off represented by annual paid holidays as a factor in the reduction of working hours;
- (e) allowing any other method of reducing hours of work to be applied by means of collective agreements approved by an act of public authority, provided that the average weekly maxima proposed above are adhered to.

(3) The Convention would then provide for the same exceptions for extra time as are laid down in Article 3 (accidents, urgent work to be done to machinery or plant, cases of *force majeure*) and in Article 6 (a) (preparatory and complementary work, persons whose work is essentially intermittent) of the existing Convention applicable to industrial undertakings.

As regards commercial overtime, a general limit would be laid down; the Convention might provide for the utilisation of the overtime allowed in three stages. A first quota would be left entirely at the disposal of the employer, a second quota could only be used with the permission of the factory inspectorate, and a third quota could only be used as a result of a collective agreement for the purpose.

In respect of extra pay for the overtime just referred to, it might be laid down either that the rate is to be in all cases one and a quarter times the regular rate of pay or that it should be a progressive rate.

(4) Lastly, the Convention could fix a special weekly average or averages of hours of work for countries given special treatment by the existing Convention applicable to industrial undertakings.

The above might constitute the essential contents of a Convention applicable to industrial undertakings. If it should be desired to extend the scope of the regulation to commerce and offices, the separate Convention which would apply to such establishments could be based on the above principles, subject to certain adaptations which would be necessary to meet the special requirements of the establishments concerned, the main lines of which have been set out above.

* * *

As was pointed out at the beginning of this Chapter, it is for the Conference to say whether the proposals for international regulation which have been outlined above are practicable from the technical standpoint; whether they give the international guarantees required; and whether they would be likely to command general

acceptance by Governments. If the Conference considers that these proposals would not be generally acceptable to Governments, it may consider whether the principles embodied in them should not be put into a Recommendation. In any case, the International Labour Conference, if it ultimately rejects a proposed Draft Convention, can always of course transform the draft into a Recommendation, on the basis of Article 6 (12) of the Standing Orders of the Conference.

WAGES

If the Conference agrees to a scheme for a Convention or a Recommendation for reducing hours with a view to diminishing unemployment, it may nevertheless be deemed necessary to consider the effects which such a measure is likely to have on wages and the standard of life of the worker. The experiments of which an account is given in this report show that where hours of work have been reduced the treatment of wages has differed widely in different cases. In numerous instances wages have been proportionately reduced. In others, either there has been no cut in wages or a cut less than proportionate to the reduction of hours of work.

It has been maintained that any international Convention for reducing hours of work should at the same time deal with the question of wages. It may be observed, however, that when the previous Conventions on hours of work were framed the question of wages was not gone into. Apart from other considerations, the principal reason why no attempt was made to deal with wages internationally on previous occasions was that, with one or two possible exceptions, Governments do not possess the necessary powers to regulate wages nationally. It is thus *a fortiori* impossible for them to enter into an international agreement for the regulation of wages.

Nevertheless, the International Labour Conference can hardly be indifferent to a question of such importance, especially if there were reason to think that a reduction of real wages would follow from a Convention which it adopted. Moreover, at its last Session the Conference pronounced definitely on the question in the resolution on the forty-hour week, which condemned reduction of wages as a policy likely to aggravate the crisis. It may accordingly be felt desirable to consider the adoption of a Recommendation deprecating any reduction of wages which is likely to diminish the

workers' standard of living. In this connection, attention may be drawn to Appendices II and IV to this report, which have been prepared by the Office in response to requests for information in regard to the relation between wages and productivity and the relation between wages and the cost of production, and both of which may be considered relevant to any discussion of the present subject.

SUPPLY OF INFORMATION

Under the constitutional rules of the International Labour Organisation each State Member is required to furnish an annual report on the measures taken by it to give effect to a Convention to which it is a party, and this report, in accordance with Article 408 of the Treaty, has to be made in such form and contain such particulars as the Governing Body may request.

In addition to this information on the application of the Convention, however, it would appear desirable that co-ordinated efforts should be made to collect definite information on the extent of technological unemployment.

Reference has been made in this report to the importance of technical progress and other forms of rationalisation as a cause of unemployment. It must be recognised, however, that while there is very little doubt about the fact that unemployment is caused in this way, there is hardly any precise information as to the extent of such technological unemployment.

This problem has already engaged the attention of the International Labour Office, and in 1931 a report on the subject was prepared and published¹. A certain number of general statistics are available showing the steady increase in production per man-hour and the comparatively slow rate of increase in the number of workers employed in manufacturing industry. But this gives only a very incomplete picture of the situation. Nobody disputes that workers are displaced by technical progress, but the question is to what extent and with what rapidity they are absorbed elsewhere. There is also the question of the extent to which skilled workers in particular are deprived of the opportunity of earning a livelihood in the trade to which they were trained. A number of comparatively small enquiries into these questions have been made in one or two countries. Reference has been made to them either in the

¹ "The Effects of Rationalisation on Employment", in *Unemployment Problems in 1931*, Studies and Reports, Series C, No. 16. The same study was published in *The Social Aspects of Rationalisation*, Series B, No. 18.

volumes already quoted or in other publications of the Office. But it is noteworthy that the official Committee recently appointed by the Government of the United States to consider the whole problem emphasised the insufficiency of the existing information on the matter and the difficulty of obtaining it. What seems clearly to be required is a systematic series of enquiries, conducted as far as possible on a uniform basis in different countries so that the results may be more or less internationally comparable.

An exchange of views on this matter at the Conference would be of undoubted value and might indicate the best method of initiating action along the lines suggested.

* * *

The present Chapter has indicated the proposals which it is felt might be taken into consideration for determining the form and contents of a scheme of international regulation intended to promote re-employment. In order to facilitate the discussions of the Conference, the points dealt with in this Chapter are summarised below.

I. — Is a Solution of the Problem Desirable and Possible?

Does it appear from this report and from the discussions which are to take place at the Conference on the basis of the report that a concerted reduction of hours of work is desirable and possible, i.e.:

- (a) *Do the results obtained in cases where a reduction of hours of work has been objectively applied go to show that unemployment could be substantially decreased by this means?*
- (b) *Could a concerted reduction of hours of work diminish unemployment to some extent, either immediately or when an economic revival, even on a partial scale, takes place?*
- (c) *Should such a concerted reduction be permanent or temporary?*

II. — What Should Be the Main Lines of International Regulation?

1. *Should a Convention be aimed at which would be as rigid as the Washington Convention on hours of work in industrial undertakings and the Geneva Convention on hours of work in commerce and offices? Could a scheme of regulation of this type be easily, rapidly and effectively applied in the present circumstances?*

2. *Should a more elastic Convention be aimed at ?*

If so, should the Convention be confined to laying down the principle of a general maximum, i.e. an average forty-hour week, leaving it open to those concerned to choose one or more of the following methods for giving effect to such average :

- (a) increasing the number of shifts for work which necessarily has to be carried on continuously ;*
- (b) adequately arranging shifts for other work carried on by multiple shifts ;*
- (c) reducing weekly hours of work or organising a rotation system for work carried on in a single shift ;*
- (d) taking into account working time represented by annual paid holidays as a factor in the reduction of hours of work laid down by the Convention ;*
- (e) regulating hours of work by collective agreements, these agreements to conform with the provisions of the Convention and to be communicated to the International Labour Office by the Governments concerned ?*

3. *Should the Draft Convention apply not only to industrial undertakings but also to commerce and offices as covered by the Conventions referred to under II, 1 ? Should small undertakings or establishments in which the reduction of hours of work might meet with special difficulties be included or excluded ?*

4. *Possibility of considering one or more Conventions of a different type from those referred to above.*

5. *If a Convention could not be obtained, could a Recommendation be considered which would advocate the best methods of reducing hours of work ?*

6. *In any case, in whatever form the scheme of regulation adopted for reducing hours of work might be embodied, should a Recommendation concerning the standard of living of the workers and wages be considered ?*

7. *In view of the spread of technological unemployment, on which there is a lack of definite information, should some provision be considered for ensuring regular transmission to the International Labour Office by Governments of information on this subject, drawn up as far as possible on a uniform plan ?*

APPENDICES

APPENDIX I

UNEMPLOYMENT STATISTICS

The following tables give statistics of unemployment and employment in various countries and in different industries and occupations during recent years. Table I gives the number and, as far as possible, the percentages unemployed in each country during the period 1925-1932. Monthly figures are given wherever possible. The yearly averages have been calculated usually by the International Labour Office. Table II gives the statistics of unemployment reproduced in table I subdivided in industrial or occupational groups for the period 1927-1932. Table III gives employment per industry for a certain number of countries which do not possess satisfactory unemployment statistics. The industries and occupations have been arranged according to the "Classification of Industries" reproduced on the following page.

The statistics of unemployment and employment are obtained from various sources; they differ in scope, in definition of the unemployed, and in methods of compilation. It must also be remembered that the figures relate only to *recorded* unemployment, and in most countries fall far short of the reality. It is therefore generally impossible to make comparisons as to the extent of unemployment in the various countries. Their principal value is in indicating the fluctuations in the state of employment over a period of time; and only between the movements of the series is international comparison possible. It should also be remembered that the various statistics are not equally sensitive to changes in the labour market, and that as a consequence an equal change in any two series does not necessarily represent a corresponding change in the countries concerned ¹.

¹ The figures relating to *partial* unemployment are of greatly varying value and impossible to compare internationally: for Belgium, the United Kingdom and Switzerland, the term "intermittently employed" is used in the table to denote persons suspended from work on the understanding that they may shortly return to their former employment. This category may, therefore, include persons on "short time". In the case of Germany and Italy, the term "partially unemployed" refers to persons on "short time".

Notes in which the scope and methods of compilation of the various series are summarised were given in the *International Labour Review* for January 1932, supplemented in subsequent numbers by notes on changes since that date, and the principal problems of statistics of unemployment are examined and discussed in two reports of the Office¹.

Classification of Industries Used in Tables II and III

- A. Agriculture (including forestry, hunting, fishing).
- B. Mining (including quarries and oil-wells).
- C. Metals (metallurgy, mechanical and electrical engineering, construction and repairing of vehicles, ships, etc.).
- D. Earthenware, stoneware, glass.
- E. Building and construction.
- F. Wood (felling, floating, saw-milling, woodwork, furniture).
- G. Paper and printing.
- H. Textiles.
- I. Clothing (including footwear).
- J. Skins, leather, rubber.
- K. Chemical industry.
- L. Food, drink, tobacco.
- M. Land transport.
- N. Navigation (maritime and air).
- O. Water, electricity and gas supply.
- P. Post, telegraph, telephone.
- Q. Other public services (street-cleaning, police, fire departments, etc.).
- R. Public administration (not mentioned above).
- S. Commerce, banking, insurance.
- T. Personal services (hotels and restaurants, domestic service, laundries, etc.).
- U. Entertainments, etc.
- V. Establishments covering professional occupations.

¹ *Methods of Statistics of Unemployment* (Studies and Reports, Series N, No. 7; Geneva, 1925), and *Report on the Proceedings of the Second International Conference of Labour Statisticians*, containing the resolutions adopted by this Conference on the best methods of compiling statistics of unemployment (Studies and Reports, Series N, No. 8; Geneva, 1925).

Australia

Trade Union Returns: Number (a) and Percentages (b) Unemployed

	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
March	37,836	9.3	34,161	8.2	26,280	5.9	45,638	10.7	39,159	9.3	63,144	14.6	113,614	25.8	120,366	28.3
June	36,490	10.2	24,920	6.7	29,217	6.4	46,656	11.2	40,996	10.0	80,595	18.5	118,424	27.6	127,528 ¹	30.0
September	29,861	7.9	32,871	7.6	29,991	6.7	47,745	11.4	52,480	12.1	90,379	20.5	120,694	28.3	—	—
December	34,287	8.1	25,351	5.7	38,641	8.9	42,637	9.9	56,801	13.1	104,951	23.4	118,732	28.0	—	—
Average	34,619	8.9	29,326	7.1	31,032	7.0	45,669	10.8	47,359	11.1	84,767	19.3	117,866	27.4	—	—

¹ Provisional figures

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)
Austria
I. — *Unemployment Insurance Statistics: Unemployed in Receipt of Benefit*

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	187,099	231,361	235,464	230,755	245,984	273,195	331,239	358,114
February	188,917	228,763	244,257	223,964	264,148	284,543	334,041	361,948
March	178,580	202,394	208,346	193,449	225,035	239,097	304,084	352,444
April	148,434	173,115	181,175	154,817	167,107	192,479	246,845	303,888
May	130,778	154,821	158,332	130,393	130,469	162,679	208,852	271,481
June	118,315	150,981	145,136	118,737	110,266	153,075	191,150	265,040
July	117,183	152,485	136,909	115,211	104,399	153,188	194,364	266,365
August	116,365	151,054	135,938	113,851	101,845	156,145	196,321	269,179
September	119,004	148,111	129,948	112,595	104,947	163,894	202,130	275,840
October	130,902	151,183	127,352	122,557	125,850	192,778	228,101	297,791
November	159,248	168,820	159,783	155,235	167,487	237,745	273,658	—
December	207,834	205,350	207,120	202,659	226,567	294,845	329,627	—
Average	149,138	195,817	172,480	156,185	164,509	208,389	253,368	—

II. — *Employment Exchange Statistics: Applicants for Work Registered*

Month	1927	1928	1929	1930	1931	1932
January	269,633	260,018	274,609	308,238	374,926	422,684
February	275,984	252,272	293,247	318,066	377,294	426,698
March	236,261	219,532	252,318	270,759	345,939	417,178
April	207,878	179,637	193,296	223,116	286,932	367,666
May	184,660	153,946	154,669	192,151	249,108	334,887
June	168,997	140,931	133,406	179,610	230,766	327,531
July	160,484	137,045	127,471	163,016	235,357	328,956
August	160,529	135,609	124,031	186,178	237,758	334,415
September	154,291	136,984	130,412	199,037	249,984	345,148
October	153,987	150,180	154,576	231,308	281,545	—
November	190,569	185,512	200,729	278,786	337,080	—
December	238,073	237,661	265,684	341,073	396,981	—
Average	200,112	182,444	191,987	242,612	300,223	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Belgium

Unemployment Insurance Statistics: Number (a) and Percentages (b) of Wholly and Intermittently Unemployed

End of month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. — Wholly Unemployed																
January	12,678	2.0	16,159	2.7	15,920	2.6	13,730	2.2	22,657	3.5	22,542	3.5	77,181	11.1	153,925	20.0
February	10,619	1.7	9,616	1.6	13,856	2.3	7,180	1.2	28,772	4.6	16,085	2.6	81,750	11.7	168,676	21.0
March	9,414	1.5	8,489	1.4	11,294	1.8	5,294	0.8	6,025	0.9	14,030	2.2	81,305	11.3	158,016	19.3
April	9,817	1.6	7,395	1.3	10,947	1.8	4,922	0.8	2,507	0.4	13,715	2.2	70,377	10.0	153,441	18.7
May	7,289	1.2	6,075	1.0	9,146	1.5	4,062	0.7	2,382	0.4	12,119	1.9	56,250	7.9	160,700	18.9
June	6,483	1.1	5,200	0.9	8,323	1.4	3,709	0.6	2,559	0.4	12,226	1.9	64,014	9.0	157,432	18.7
July	6,701	1.1	5,158	0.9	7,850	1.3	4,471	0.7	4,037	0.6	15,202	2.4	64,754	9.0	169,411	19.6
August	5,634	0.9	7,268	1.2	7,562	1.2	3,397	0.5	3,200	0.5	19,242	3.0	70,873	9.9	165,596	19.5
September	4,758	0.8	6,818	1.1	8,595	1.4	3,664	0.6	3,492	0.5	24,109	3.6	75,222	10.2	163,048	18.3
October	4,407	0.7	8,088	1.4	8,746	1.4	3,954	0.6	3,261	0.5	27,322	4.3	81,318	11.1	—	—
November	13,513	2.3	8,217	1.4	8,595	1.4	3,563	0.6	6,895	1.1	38,973	6.1	97,807	12.6	—	—
December	16,897	2.8	15,804	2.6	22,326	3.6	11,988	1.9	15,761	2.4	63,540	9.2	129,380	17.0	—	—
Average	9,018	1.5	8,601	1.5	11,112	1.8	5,836	0.9	8,462	1.3	23,250	3.6	79,186	10.9	—	—
B. — Intermittently Unemployed																
January	27,550	4.3	32,017	5.4	31,288	5.1	33,242	5.3	24,945	3.9	25,782	4.0	112,784	16.2	179,560	23.2
February	28,590	4.6	18,209	3.1	22,321	3.6	24,002	4.0	42,197	6.8	31,222	4.5	121,906	17.4	194,509	24.3
March	33,509	5.5	16,573	2.8	18,888	3.1	17,108	2.8	21,519	3.4	28,469	4.5	125,972	17.7	191,742	23.4
April	33,189	5.5	11,803	2.0	21,351	3.5	17,769	2.8	12,361	1.9	36,606	5.8	110,139	15.6	187,095	22.8
May	30,206	4.9	12,643	2.1	22,983	3.8	22,574	3.6	8,686	1.4	37,761	6.1	97,735	13.8	191,084	22.5
June	29,108	4.8	13,148	2.2	20,098	3.3	19,115	3.0	11,494	1.8	41,336	6.5	103,273	14.5	183,894	21.8
July	24,490	4.0	10,233	1.7	23,953	3.9	23,768	3.8	16,452	2.6	48,580	7.7	117,404	16.4	174,646	20.3
August	17,434	2.9	16,530	2.8	25,064	4.1	23,888	3.8	15,614	2.5	51,710	8.2	120,842	16.8	168,818	19.7
September	11,034	1.9	14,821	2.5	21,680	3.5	20,561	3.3	16,714	2.6	60,181	9.5	121,674	16.5	170,081	19.9
October	10,918	1.8	13,295	2.2	21,613	3.5	22,458	3.5	13,930	2.2	54,804	8.5	126,060	17.2	166,120	18.9
November	29,800	5.0	14,907	2.5	20,909	3.4	13,915	2.2	13,176	2.1	76,043	12.0	140,776	18.1	—	—
December	27,491	4.6	17,889	3.0	35,006	5.6	28,218	4.5	29,309	4.6	117,519	17.0	164,099	21.5	—	—
Average	25,260	4.5	16,006	2.7	23,763	3.9	22,293	3.5	18,831	3.0	50,918	7.9	121,890	16.9	—	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)
Canada

I. — Trade Union Returns: Number (a) and Percentages (b) Unemployed

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	16,357	10.2	11,906	8.1	9,748	6.4	12,082	6.8	11,850	6.3	22,795	10.8	35,143	16.0	41,330	22.0
February	15,619	9.5	11,993	8.1	10,596	6.5	12,554	7.0	12,854	6.8	24,175	11.5	31,602	15.6	37,754	20.6
March	13,159	8.5	11,069	7.3	8,975	5.7	11,965	6.5	11,662	6.0	22,912	10.8	32,308	15.5	36,961	20.1
April	14,300	8.7	11,093	7.3	9,871	6.0	9,573	5.2	10,382	5.5	18,581	9.0	30,786	14.9	40,936	23.0
May	11,505	7.0	7,442	4.9	8,515	5.2	6,657	3.7	7,750	4.0	20,424	10.3	32,163	16.2	38,692	21.9
June	9,578	6.1	5,965	4.1	5,410	3.2	5,800	3.2	5,723	2.9	21,292	10.6	32,667	16.3	38,115	21.8
July	8,547	5.2	3,226	2.5	5,539	3.3	4,500	2.5	6,000	3.0	18,473	9.2	32,396	16.2	38,240	20.4
August	7,232	4.4	3,384	2.5	6,210	3.7	4,274	2.4	7,159	3.5	18,250	9.3	31,247	15.8	35,054	1
September	8,374	5.7	4,837	3.3	5,314	3.1	4,068	2.2	7,654	3.7	19,422	9.4	35,048	18.1	—	—
October	7,556	5.1	3,929	2.6	6,743	3.9	5,705	3.1	12,716	6.0	22,463	10.8	35,325	18.3	—	—
November	8,445	5.7	7,032	4.7	8,888	5.2	7,742	4.2	19,832	9.3	28,266	12.8	35,206	18.6	—	—
December	11,716	7.9	9,349	5.9	11,893	6.6	12,553	6.6	24,290	11.4	37,437	17.0	39,713	21.1	—	—
Average	11,032	7.0	7,602	5.1	8,142	4.9	8,120	4.5	11,488	5.7	22,873	11.1	33,625	16.8	—	—

II. — Employment Exchange Statistics: Applicants for Work Registered

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	28,248		19,430		15,445		16,794		16,616		23,813		58,861		82,536	
February	27,227		17,216		15,595		15,957		16,952		25,379		56,638		79,334	
March	26,061		16,705		16,906		15,996		16,622		25,816		55,390		71,188	
April	17,654		13,541		14,358		14,386		13,143		24,658		50,748		78,283	
May	15,818		11,630		13,684		12,508		12,436		24,815		49,324		76,269	
June	14,678		10,711		12,985		11,344		11,793		24,957		57,530		73,573	
July	12,928		9,741		10,560		9,539		12,406		25,333		67,924		70,124	
August	10,837		9,364		10,398		8,620		11,174		26,727		81,356		66,207	
September	11,123		9,513		10,880		8,783		13,728		32,565		93,302		—	
October	11,951		10,402		12,247		12,398		15,652		47,682		93,855		—	
November	16,584		14,389		16,328		14,750		19,761		50,512		93,690		—	
December	13,364		12,228		13,120		12,018		19,663		54,840		98,705		—	
Average	17,206		12,881		13,544		12,758		14,996		33,008		71,385		—	

1 Provisional figures.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (*continued*)

Chile

Employment Exchange Statistics: Applicants for Work Registered

Month	1931	1932	Month	1931	1932	Month	1931	1932
January	6,387	56,180	June	18,573	90,570	October	40,044	—
February	6,132	63,930	July	23,211	—	November	47,345	—
March	10,520	74,960	August	30,636	101,615	December	55,733	—
April	9,890	73,349	September	43,131	—	Average	25,394	—
May	13,095	79,263						

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Czechoslovakia

I. — Trade Union Fund Returns: Number (a) and Percentages (b) Unemployed in Receipt of Benefit

Month	1926		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	10,033	—	22,783	2.0	33,371	2.8	20,300	1.8	31,819	2.7	39,199	3.6	111,016	9.5	186,308	14.0
February	9,866	—	25,333	2.3	31,431	2.7	20,131	1.8	36,147	3.3	40,550	3.6	117,024	10.0	197,612	14.8
March	8,281	—	27,535	2.5	27,074	2.5	17,734	1.6	30,526	2.7	45,567	4.0	119,771	10.1	195,076	14.6
April	4,386	—	30,056	2.7	22,400	2.1	16,683	1.4	26,835	2.4	42,664	3.7	107,238	8.9	180,456	13.3
May	4,433	—	33,670	3.0	18,057	1.6	16,556	1.5	21,866	1.9	41,098	3.6	93,941	7.6	171,895	12.6
June	6,086	—	40,034	3.4	13,833	1.3	13,468	1.2	19,436	1.9	37,853	3.4	82,534	6.6	168,452	12.3
July	6,986	—	46,052	4.1	11,845	1.1	13,627	1.2	16,859	1.6	46,800	4.1	82,759	6.6	167,529	12.2
August	7,310	—	46,129	4.0	10,032	0.9	15,588	1.4	18,674	1.8	52,694	4.7	86,261	6.9	172,118	12.5
September	9,775	—	42,601	3.7	9,609	0.8	16,559	1.5	19,468	1.9	57,542	5.3	84,660	6.7	170,682	12.4
October	10,970	—	35,948	3.1	8,677	0.8	13,228	1.1	16,248	1.5	61,213	5.5	88,600	6.9	—	—
November	12,348	—	29,020	2.5	10,350	1.0	12,532	1.1	17,108	1.6	65,904	5.9	106,015	8.2	—	—
December	17,196	—	29,295	2.5	14,334	1.3	19,698	1.7	30,170	2.8	93,476	8.3	146,325	11.3	—	—
Average	8,977	—	34,038	3.0	17,626	1.6	16,342	1.4	23,763	2.2	52,047	4.6	102,179	8.3	—	—

II. — Employment Exchange Statistics: Unemployed Registered

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	71,042	61,876	83,271	57,148	53,242	73,891	313,511	583,138
February	67,350	62,079	83,205	55,184	55,224	86,156	343,972	631,736
March	60,710	64,088	71,867	46,689	49,740	88,005	339,505	633,907
April	48,070	66,098	60,260	39,462	43,094	79,721	296,756	555,832
May	44,567	68,991	52,470	35,999	36,186	77,069	249,686	481,228
June	40,200	69,372	45,460	32,701	34,434	73,464	220,038	466,948
July	42,036	71,548	39,832	32,485	32,701	77,309	210,908	453,294
August	45,402	77,445	40,863	34,083	34,789	88,005	215,040	460,952
September	42,440	70,767	37,634	31,182	34,341	104,534	228,351	486,935
October	39,743	66,502	35,777	29,397	34,702	122,379	254,201	524,171 ¹
November	42,485	64,205	38,220	29,919	38,293	155,203	337,654	—
December	48,384	71,237	45,571	39,400	52,809	239,564	486,363	—
Average	49,369	67,851	52,869	38,636	41,630	105,442	291,332	—

¹ Provisional figures.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Danzig, Free City of

Employment Exchange Statistics: Unemployed Registered

Month	1929	1930	1931	1932	Month	1929	1930	1931	1932
January	15,778	19,282	27,081	34,912	August	8,958	15,987	21,509	28,989
February	18,565	21,153	28,192	36,258	September	9,296	16,073	22,922	30,469
March	18,227	20,376	27,070	36,181	October	10,664	17,307	24,932	31,806
April	15,014	18,371	24,186	33,418	November	13,146	20,372	28,066	—
May	11,135	16,232	20,686	31,847	December	16,198	24,429	32,956	—
June	8,876	14,975	19,855	31,004	Average	12,005	18,291	24,898	—
July	9,007	15,330	20,420	29,195					

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Denmark

I. — Trade Unions Fund Returns: Number (a) and Percentages (b) Unemployed

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	44,643	16.6	81,869	29.8	87,315	31.8	81,457	29.9	76,059	27.7	56,837	19.9	69,698	24.2	103,308	34.1
February	44,668	16.5	74,700	27.3	85,817	31.2	71,178	26.2	81,355	29.7	58,879	20.5	70,825	24.5	108,942	35.9
March	40,955	14.7	58,014	21.2	71,811	26.2	58,434	21.6	59,708	21.8	43,773	15.3	63,786	22.1	109,002	35.8
April	—	—	44,983	16.5	62,928	23.0	45,414	16.8	36,592	13.3	33,392	11.6	44,926	15.3	87,213	27.7
May	—	—	40,302	14.7	52,419	19.1	38,492	14.2	29,671	10.8	27,087	9.4	36,203	12.3	77,658	24.8
June	24,135	9.1	42,993	15.6	49,405	18.0	36,917	13.5	27,398	10.0	25,191	8.7	33,379	11.3	78,624	24.9
July	22,393	8.3	46,191	16.8	47,172	17.2	36,915	13.6	26,621	9.6	26,752	9.3	35,019	11.8	90,593	28.7
August	26,348	9.8	46,117	16.8	44,827	16.4	35,474	13.1	25,164	9.1	25,946	9.0	35,214	11.8	92,451	29.2
September	28,509	10.6	44,677	16.3	43,990	16.0	33,099	12.2	24,175	8.7	26,081	9.0	36,119	12.1	93,910	29.6
October	36,526	13.5	50,398	18.3	48,907	17.5	39,436	14.5	28,194	10.1	32,963	11.4	47,346	15.8	102,645	34.4
November	55,797	20.5	61,467	22.4	59,847	21.8	48,337	17.7	36,302	13.0	45,307	15.5	66,478	22.1	—	—
December	85,944	31.7	88,854	32.2	87,116	31.6	77,558	28.4	62,563	22.4	73,363	25.1	97,233	32.2	—	—
Average	39,689	14.7	56,713	20.7	61,705	22.5	50,226	18.5	42,817	15.5	39,631	13.7	53,019	17.9	—	—

II. — Employment Exchange Statistics: Applicants for Work Registered

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	44,185	85,265	92,227	83,320	77,576	58,262	72,961	138,903
February	44,644	79,528	92,570	74,412	84,676	61,882	75,613	147,735
March	40,751	64,378	77,727	64,044	66,029	49,391	69,594	144,739
April	36,465	50,485	68,869	50,311	39,755	36,223	49,293	111,130
May	30,394	43,668	56,019	40,554	32,722	29,517	39,027	85,175
June	23,697	46,177	53,538	38,903	29,687	25,811	35,174	84,287
July	22,528	48,774	50,201	38,276	28,538	27,205	37,326	111,372
August	25,752	48,759	47,771	37,073	27,019	27,155	37,539	116,899
September	28,412	47,561	46,352	34,436	25,793	27,583	38,184	121,633
October	35,142	52,736	48,329	40,862	29,281	34,032	48,971	131,065
November	51,139	65,828	61,032	50,947	36,664	45,804	81,210	—
December	84,595	92,784	85,618	70,135	57,927	63,747	128,272	—
Average	38,892	60,495	65,021	51,864	44,581	40,551	59,430	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued.)

Estonia

Employment Exchange Statistics: Unemployed Registered

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	3,693	3,525	4,718	4,421	6,329	5,608	5,364	9,318
February	3,757	2,444	4,743	4,113	4,624	4,580	4,070	9,096
March	2,867	1,916	4,405	3,136	4,165	3,575	3,729	8,895
April	2,108	2,249	2,943	2,162	3,014	2,227	2,424	6,029
May	1,783	2,239	2,336	1,740	2,169	1,515	1,368	4,853
June	1,771	1,051	1,907	883	1,110	910	831	3,137
July	1,260	893	729	486	780	762	634	2,032
August	941	731	809	467	609	1,039	933	3,256
September	883	811	1,201	706	902	1,414	2,096	4,284
October	1,904	2,309	3,278	1,561	3,065	3,282	5,425	—
November	4,607	4,157	4,940	4,369	5,288	7,554	7,554	—
December	3,213	3,807	4,437	7,770	6,116	6,063	9,055	—
Average	2,399	2,178	3,037	2,629	3,181	3,054	3,632	—

Finland

Employment Exchange Statistics: Unemployed Registered

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	4,896	3,832	3,633	2,942	4,731	12,751	11,706	20,944
February	4,420	3,462	3,029	2,495	4,155	10,784	11,557	18,856
March	3,502	2,222	2,104	2,139	3,190	10,062	11,491	17,699
April	1,882	1,961	1,702	1,482	3,045	7,274	11,584	16,885
May	1,398	1,273	1,239	868	1,624	4,666	7,342	13,189
June	1,155	924	1,130	811	1,157	3,553	6,320	12,709
July	984	949	882	762	1,188	4,026	6,790	13,278
August	1,563	1,212	1,221	857	1,859	5,288	9,160	16,966
September	2,011	1,325	1,251	946	2,710	7,157	12,176	17,849
October	2,776	1,813	1,621	1,600	4,997	10,279	14,824	—
November	3,604	2,330	2,449	3,045	9,495	10,740	18,095	—
December	2,176	2,172	2,152	2,868	8,716	9,336	17,223	—
Average	2,531	1,956	1,868	1,735	3,906	7,993	11,522	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)
France

I. — Relief Fund Statistics: Unemployed in Receipt of Relief

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	705	547	56,275	17,840	1,604	1,484	28,536	241,487
February	1,929	713	80,941	14,408	3,527	1,683	40,766	293,198
March	1,016	467	70,381	10,473	1,078	1,630	50,815	303,218
April	931	442	58,462	7,273	706	1,203	49,958	282,013
May	675	394	39,555	3,746	570	859	41,339	262,184
June	626	384	21,934	1,659	394	4,019	36,237	232,371
July	637	342	16,934	1,095	390	856	35,916	264,642
August	581	369	14,825	1,010	403	964	37,673	263,068
September	618	336	11,272	563	385	988	38,524	259,337
October	523	429	8,642	453	396	1,663	56,121	217,090
November	557	571	10,080	503	577	4,893	92,157	—
December	645	17,178	13,221	895	817	11,952	147,009	—
Average	712	1,848	33,549	4,993	905	2,432	54,587	—

II. — Employment Exchange Statistics: Applications for Work

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	12,537	12,863	73,506	32,899	12,066	13,481	44,711	278,683
February	12,999	11,379	96,591	28,949	13,194	13,597	59,915	337,129
March	13,948	8,795	80,741	22,361	8,826	13,618	71,936	347,446
April	12,258	10,369	68,614	18,420	9,714	11,408	69,205	341,060
May	10,109	8,882	48,241	12,336	9,055	11,871	57,305	322,320
June	10,485	8,272	32,632	9,347	8,333	10,168	51,354	265,478
July	10,489	7,682	29,264	8,025	8,092	9,151	50,946	296,401
August	9,154	8,597	29,576	9,572	8,865	11,214	54,569	298,479
September	10,076	11,753	27,673	10,150	9,577	11,949	56,448	296,446
October	11,099	11,759	24,823	11,112	11,155	15,629	80,365	294,509
November	11,243	16,126	28,383	11,535	11,917	18,594	123,891	—
December	9,902 ¹	23,985	27,439	8,593	9,811	22,879	177,294	—
Average	11,167	11,706	47,289	15,275	10,050	13,605	74,828	—

¹ Week of 14-19 December 1925.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Germany

I. — Trade Union Returns: Number (a) and Percentages (b) of Wholly and Partially Unemployed

Month	1925	1926	1927	1928	1929	1930	1931	1932
	a	b	a	b	a	b	a	b
A. — Wholly Unemployed								
January	283,797	8.1	815,434	22.6	585,687	16.5	464,454	11.2
February	264,263	7.3	786,263	22.0	559,621	15.5	431,765	10.4
March	241,987	5.8	727,312	21.4	420,550	11.5	383,924	9.2
April	157,184	4.3	655,537	18.6	326,786	8.9	295,135	6.9
May	129,933	3.6	639,751	18.1	262,302	7.0	270,103	6.3
June	130,416	3.5	627,196	18.1	239,597	6.3	268,443	6.2
July	131,966	3.7	593,917	17.7	211,380	5.5	273,696	6.3
August	154,032	4.3	567,541	16.7	194,635	5.0	288,375	6.5
September	168,657	4.5	513,364	15.2	178,916	4.6	293,691	6.6
October	214,054	5.8	476,952	14.2	177,012	4.5	325,293	7.3
November	394,096	10.7	484,978	14.2	294,413	7.4	427,516	9.5
December	706,253	19.4	572,653	16.7	519,573	12.9	746,834	16.7
Average	245,528	6.7	622,242	18.0	330,873	8.7	372,377	8.6
							606,606	13.2

B. — Partially Unemployed

Month	1925	1926	1927	1928	1929	1930	1931	1932
	a	b	a	b	a	b	a	b
January	166,476	5.5	818,637	22.6	234,368	6.6	146,516	3.5
February	163,345	5.3	771,405	21.6	210,724	5.8	151,646	3.6
March	158,831	5.1	736,640	21.7	160,080	4.4	155,797	3.7
April	153,046	4.9	673,993	19.1	136,338	3.7	180,712	4.2
May	155,033	5.0	641,780	18.2	109,246	2.9	215,759	5.0
June	163,461	5.2	595,973	17.2	101,378	2.7	255,090	5.9
July	177,280	5.8	563,823	16.6	99,225	2.6	283,562	6.5
August	214,085	6.9	541,685	15.0	108,362	2.8	312,051	7.1
September	268,186	8.5	427,380	12.7	93,113	2.4	303,666	6.9
October	398,649	12.4	343,303	10.2	79,076	2.0	303,737	6.8
November	573,446	16.0	284,774	8.3	86,905	2.2	339,461	7.6
December	695,949	19.8	249,628	7.3	123,207	3.1	336,173	7.5
Average	274,053	10.0	551,668	16.0	128,500	3.4	248,664	5.7
							344,032	7.5

II. — Employment Exchange Statistics: Unemployed Registered

Month	1929	1930	1931	1932	Month	1929	1930	1931	1932
January	3,049,706	3,217,608	4,886,925	6,941,910	August	1,271,990	2,882,531	4,214,765	5,223,810
February	2,683,937	3,365,811	4,971,843	6,128,429	September	1,323,603	3,004,275	4,354,983	5,102,750
March	1,711,665	3,040,797	4,743,931	6,034,100	October	1,557,146	3,253,082	4,623,480	5,109,439 ¹
April	1,349,833	2,786,912	4,358,153	5,739,070	November	2,035,667	3,763,408	5,059,773	—
May	1,260,044	2,634,718	4,052,950	5,582,620	December	2,850,849	4,383,843	5,668,187	—
June	1,260,044	2,640,681	3,953,946	5,475,778	Average	1,678,824	3,144,910	4,573,218	—
July	1,251,452	2,765,258	3,989,686	5,392,248					

¹ Provisional figures.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Great Britain and Northern Ireland

Unemployment Insurance Statistics: Number (a) and Percentages (b) of Wholly and Intermittently Unemployed

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. — Wholly Unemployed																
January	—	—	1,089,065	9.2	1,139,634	9.5	977,178	8.3	1,199,633	9.8	1,183,974	9.8	2,044,209	16.5	2,354,044	18.4
February	—	—	1,036,791	8.7	1,054,317	8.8	967,595	8.2	1,161,184	9.8	1,211,262	10.0	2,073,578	16.7	2,317,784	18.2
March	—	—	973,618	8.2	947,189	7.9	903,805	7.7	1,003,575	8.4	1,284,231	10.6	2,052,826	16.5	2,233,425	17.5
April	—	—	916,567	7.7	861,629	7.2	898,919	7.6	945,820	8.0	1,309,014	10.8	2,027,896	16.3	2,204,740	17.3
May	—	—	1,045,470	8.8	893,701	6.7	893,304	7.6	900,562	7.6	1,339,535	11.1	2,019,533	16.3	2,183,683	17.1
June	—	—	1,082,656	9.1	787,215	6.5	917,726	7.8	884,549	7.4	1,341,818	11.1	2,037,480	16.4	2,145,157	16.8
July	—	—	1,068,513	9.0	798,179	6.6	958,567	8.1	881,189	7.4	1,405,981	11.6	2,073,892	16.7	2,185,015	17.1
August	—	—	1,087,366	9.1	821,904	6.8	979,926	8.3	918,550	7.7	1,500,990	12.4	2,142,821	17.3	2,215,704	17.4
September	—	—	1,087,473	9.1	841,652	7.0	1,019,179	8.6	937,795	7.9	1,579,708	13.1	2,217,080	17.9	2,279,779	17.9
October	—	—	1,123,394	9.3	878,104	7.2	1,059,429	8.9	992,769	8.2	1,725,731	13.9	2,305,388	18.1	2,295,500	17.9
November	—	—	1,134,137	9.4	919,895	7.6	1,105,974	9.3	1,061,618	8.8	1,836,280	14.8	2,294,902	18.0	—	—
December	—	—	1,099,850	9.1	935,696	7.7	1,083,207	9.1	1,071,849	8.9	1,853,575	14.9	2,262,700	17.7	—	—
Average	—	—	1,062,075	8.9	899,093	7.5	980,326	8.3	994,091	8.3	1,464,347	12.0	2,129,359	17.0	—	—
B. — Intermittently Unemployed ("Temporarily Stopped")																
January	—	—	228,470	1.9	311,469	2.6	283,325	2.4	296,104	2.5	336,474	2.8	618,633	5.0	500,746	4.0
February	—	—	221,032	1.8	261,127	2.1	259,909	2.2	292,680	2.4	371,840	3.1	623,844	5.0	419,319	3.8
March	—	—	197,518	1.6	240,593	2.0	223,817	1.9	200,210	1.7	409,785	3.4	612,821	5.0	426,989	3.3
April	—	—	177,262	1.5	271,461	2.2	229,729	2.0	235,555	1.9	451,506	3.8	564,884	4.6	521,705	5.0
May	—	—	673,899	5.7	255,090	2.1	274,705	2.3	276,922	2.3	516,303	4.2	558,333	4.5	638,157	5.0
June	—	—	668,477	5.6	282,171	2.4	355,634	3.0	279,108	2.4	569,931	4.7	669,315	5.4	697,639	5.5
July	—	—	668,747	5.6	315,784	2.7	418,664	3.6	296,318	2.5	664,107	5.5	732,568	5.9	735,929	5.8
August	—	—	597,141	5.1	308,049	2.6	395,293	3.4	280,332	2.4	618,558	5.1	670,342	5.4	731,104	5.7
September	—	—	560,849	4.8	284,615	2.4	335,832	2.9	265,627	2.2	608,992	5.0	663,466	5.3	645,286	5.0
October	—	—	512,492	4.3	278,169	2.3	344,482	2.9	261,711	2.2	593,223	4.8	487,591	3.8	515,405	4.0
November	—	—	496,005	4.1	289,791	2.4	347,243	2.9	293,987	2.2	532,518	4.3	439,952	3.4	—	—
December	—	—	331,990	2.8	258,609	2.1	250,404	2.1	272,371	2.2	646,205	5.3	408,117	3.3	—	—
Average	—	—	444,490	3.7	263,077	2.3	309,903	2.6	298,400	2.2	529,604	4.3	587,494	4.7	—	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued.)

Hungary

Employment Exchange Statistics: Applications for Work

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	—	13,704	13,577	14,821	13,819	47,850	48,156	66,442
February	—	12,870	13,077	14,614	13,100	47,323	52,905	68,732
March	13,128	13,229	14,264	15,187	13,897	43,333	55,248	71,210
April	12,925	12,769	12,639	14,638	15,201	43,342	53,525	68,459
May	15,386	13,131	13,822	14,979	15,701	38,342	53,983	63,345
June	12,616	12,273	12,906	13,669	14,801	40,359	45,205	59,040
July	12,931	12,802	13,341	15,177	15,035	39,578	43,026	56,985
August	12,481	12,764	14,160	14,837	14,507	37,581	44,286	60,900
September	13,424	13,526	14,609	14,997	15,818	40,588	50,495	65,436 ¹
October	14,004	14,189	14,509	15,537	16,786	44,757	52,334	—
November	13,843	15,048	15,442	14,927	16,376	47,069	63,353	—
December	13,481	13,408	14,231	13,074	17,041	52,978	65,142	—
Average	13,192	13,309	13,881	14,715	15,174	43,592	52,305	—

¹ Provisional figures.

Irish Free State

Employment Exchange Statistics: Applicants for Work¹

Month	With claims to unemployment benefit		Total		Month	With claims to unemployment benefit		Total	
	1931	1932	1931	1932		1931	1932	1931	1932
January	21,366	23,875	28,934	31,958	August	14,749	19,634	21,081	57,081
February	20,235	21,730	27,719	31,162	September	16,861	20,987	23,411	80,923
March	18,163	20,089	25,642	30,866	October	19,132	22,876	26,050	70,067
April	16,362	17,433	24,020	32,252	November	21,288	—	30,133	—
May	15,136	16,803	23,024	35,874	December	22,054	—	29,331	—
June	14,248	15,876	21,617	66,912	Average	17,852	—	25,230	—
July	14,632	17,503	21,792	77,648					

¹ New series from 1931 onwards.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Italy

Social Insurance Funds Statistics: Number of Wholly and Partially Unemployed

Month	1925	1926	1927	1928	1929	1930	1931	1932
A. — Wholly Unemployed								
January	156,382	156,139	225,346	439,211	461,889	466,231	722,612	1,051,321
February	156,959	125,803	259,059	413,383	489,347	456,638	765,325	1,147,945
March	142,552	109,471	227,947	411,785	293,277	385,432	707,486	1,053,016
April	126,521	98,216	215,316	356,795	257,603	372,236	670,353	1,000,025
May	101,405	98,490	216,141	306,629	227,682	367,183	635,183	968,456
June	85,532	83,264	214,603	247,021	193,345	392,291	573,593	905,097
July	79,526	79,678	263,091	231,219	201,868	343,061	637,531	931,291
August	72,211	83,090	291,821	248,100	216,666	375,548	693,273	945,972
September	82,764	89,434	305,930	268,883	228,831	391,630	747,764	949,408
October	85,769	112,922	322,240	282,379	297,332	446,196	799,744	—
November	112,059	148,821	375,734	321,123	332,833	534,356	878,567	—
December	122,200	181,493	414,283	363,551	408,748	613,169	982,321	—
Average	110,323	113,902	278,481	324,422	300,788	425,438	734,463	—
B. — Partially Unemployed								
January	10,067	9,287	63,716	76,327	16,555	23,185	27,924	33,224
February	11,702	8,016	56,113	58,109	15,854	26,674	27,110	26,321
March	14,282	8,333	61,699	47,036	15,846	28,036	27,545	31,636
April	16,284	6,793	54,730	45,835	16,989	24,305	28,730	32,720
May	11,674	8,600	59,091	45,569	8,713	22,835	26,059	35,528
June	6,944	6,650	103,792	30,296	10,970	21,887	24,206	31,710
July	4,291	26,756	125,376	27,590	13,503	24,209	25,321	33,218
August	5,763	26,634	134,251	24,319	10,650	24,056	30,636	33,666
September	7,223	14,519	133,568	28,746	16,835	29,734	29,322	37,043
October	8,084	10,839	130,930	25,639	17,793	19,081	32,828	—
November	5,100	6,618	133,120	24,814	19,694	22,125	30,967	—
December	8,870	10,216	107,964	27,178	21,349	21,788	32,949	—
Average	9,188	11,938	97,054	38,457	16,154	23,408	28,721	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Japan

Official Estimates: Number (a) and Percentages (b) Unemployed

Month	1930		1931		Month	1930		1931		1932	
	a	b	a	b		a	b	a	b	a	b
January	340,488	4.9	371,802	5.4	August	386,394	5.5	418,596	6.0	—	—
February	350,372	5.0	387,460	5.6	September	395,244	5.6	425,526	6.0	—	—
March	351,589	5.0	396,828	5.8	October	374,140	5.4	439,014	6.0	—	—
April	392,127	5.3	394,625	5.7	November	350,265	5.1	454,675	6.5	—	—
May	378,515	5.3	401,415	5.8	December	362,050	5.3	470,736	6.7	—	—
June	361,916	5.1	391,377	5.6	Average	368,465	5.2	413,248	5.9	—	—
July	378,484	5.2	406,923	5.8							

1 Provisional figures.

Latvia

Employment Exchange Statistics: Applications for Work

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	4,457	4,990	5,026	6,633	12,856	9,263	9,207	26,335
February	4,546	4,702	4,596	6,461	10,909	8,825	8,303	22,222
March	4,314	4,067	4,028	5,570	9,067	6,494	8,669	22,912
April	3,168	2,000	2,687	2,950	7,281	3,683	6,390	11,607
May	1,319	1,333	1,621	1,295	1,833	1,721	1,871	7,599
June	1,169	936	882	1,223	1,236	779	1,584	7,056
July	814	722	1,278	928	1,205	607	2,169	7,181
August	1,026	897	944	965	1,008	573	4,827	—
September	910	932	1,422	1,990	1,582	1,470	7,470	—
October	2,002	2,430	3,662	5,179	3,886	6,058	13,705	—
November	3,672	5,449	5,033	9,184	8,124	8,608	18,377	—
December	5,097	5,234	6,399	14,030	8,131	10,076	21,935	—
Average	2,708	2,787	3,132	4,700	5,560	4,821	8,709	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Netherlands

Unemployment Insurance Statistics: Number (a) and Percentages (b) Unemployed

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	40,899	15.1	49,633	17.7	45,658	15.6	49,424	16.1	59,154	20.9	56,335	13.9	100,340	23.2	185,558	33.7
February	32,834	12.2	28,999	10.5	41,142	13.9	27,505	9.0	66,041	19.8	50,957	12.5	109,235	23.5	183,181	32.7
March	25,718	9.4	22,338	7.9	26,949	9.1	19,740	6.3	51,822	15.1	34,996	8.6	102,743	21.8	165,705	29.3
April	21,053	7.7	18,414	6.5	22,154	7.5	15,620	5.0	12,413	3.5	28,421	6.9	68,560	14.3	142,697	25.0
May	18,470	6.9	17,904	6.3	18,661	6.3	14,083	4.4	10,820	3.0	26,211	6.3	60,189	12.2	135,510	26.4
June	18,243	6.6	16,983	5.9	17,736	6.0	14,302	4.4	9,987	2.6	23,678	5.5	59,573	11.7	151,696	30.3
July	22,791	8.3	19,683	6.9	20,593	6.9	17,100	5.3	12,030	3.1	29,075	6.7	69,026	13.3	153,561	29.6
August	23,328	8.5	20,805	7.2	19,525	6.6	16,670	5.2	12,701	3.3	32,756	7.6	70,479	15.3	161,026	31.7
September	21,182	7.7	20,695	7.2	20,161	6.7	15,697	4.8	12,517	3.2	35,532	8.2	72,738	15.7	153,673	30.2
October	19,642	7.1	21,341	7.4	20,172	6.6	15,512	4.8	13,639	3.5	41,033	9.6	81,548	18.0	153,673	30.2
November	25,392	9.1	25,889	8.3	20,750	6.6	20,296	6.2	20,941	5.3	51,915	12.5	107,372	22.1	153,673	30.2
December	44,060	16.0	35,689	12.1	44,848	14.9	38,116	11.5	48,609	12.3	81,204	18.2	147,107	27.8	153,673	30.2
Average	26,177	9.6	24,848	8.7	26,530	9.0	22,008	6.9	28,300	8.0	41,281	9.7	87,659	18.2	153,673	30.2

1 Provisional figures.

New Zealand

Employment Exchange Statistics: Applicants for Work

Month	1929	1930	1931	1932	Month		1929	1930	1931	1932
January	2,457	2,572	16,607	15,677	August		2,795	5,463	50,033	56,332
February	2,440	2,520	27,662	44,107	September		2,466	6,025	51,375	55,693
March	2,956	3,130	38,028	45,383	October		4,142	6,018	50,266	—
April	3,263	3,379	36,987	48,601	November		2,514	7,102	47,535	—
May	3,427	5,491	40,507	53,543	December		1,242	7,596	45,140	—
June	3,662	5,491	45,264	54,242	Average		2,805	5,037	41,430	—
July	3,349	5,360	47,772	55,203						

1 Provisional figures.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued.)

Norway

I. — Trade Union Fund: Number and Percentages Unemployed

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	4,206	11.9	8,305	25.5	10,290	30.2	—	25.9	7,915	22.2	7,786	19.0	11,692	26.3	14,160	30.4
February	4,330	12.0	8,642	25.0	10,618	31.1	8,642	25.9	7,501	21.0	7,851	18.9	11,524	25.8	14,354	30.6
March	4,018	11.0	9,237	25.9	9,879	28.2	8,130	24.4	7,279	20.0	7,503	17.8	11,213	24.9	15,342	32.5
April	4,722	10.2	9,137	26.0	9,352	27.4	7,654	22.8	6,277	17.0	6,701	15.8	—	—	14,585	30.7
May	3,466	9.5	8,348	23.7	8,797	25.8	—	18.0	4,694	12.5	5,239	12.2	—	—	13,465	28.3
June	3,256	8.9	7,751	22.1	7,655	22.5	4,925	14.4	4,337	11.3	4,700	10.8	—	—	12,603	26.2
July	3,056	8.3	7,137	20.4	6,964	20.6	4,671	13.6	3,999	10.2	4,723	10.8	—	—	13,084	28.9
August	3,764	10.1	7,462	21.4	6,903	20.6	4,834	15.5	4,245	12.1	5,897	13.4	—	—	—	—
September	4,934	13.5	7,719	22.3	7,380	22.3	—	16.1	4,854	14.0	7,010	15.7	—	—	—	—
October	5,988	16.4	8,425	24.4	7,757	23.4	5,677	16.1	5,682	15.4	8,031	18.0	9,018	19.6	—	—
November	7,284	19.9	—	25.0	7,852	24.8	6,171	17.4	6,286	15.4	9,386	21.4	10,577	22.8	—	—
December	9,363	26.1	14,612	29.6	9,285	28.0	7,810	22.1	7,693	18.9	11,265	25.5	12,533	27.2	—	—
Average	4,866	13.2	8,798	24.3	8,561	25.4	6,502	19.1	5,902	15.4	7,175	16.6	—	—	—	—

II. — Employment Exchange Statistics: Applicants for Work

Month	1930	1931	1932	Month	1930	1931	1932
January	22,998	29,087	35,034	August	13,880	22,971	27,543
February	23,525	29,657	38,135	September	18,145	27,584	31,431
March	23,349	29,710	38,952	October	20,820	28,612	34,810
April	20,971	29,305	37,703	November	24,926	32,294	—
May	17,351	25,979	32,127	December	27,668	35,184	—
June	14,939	23,457	28,429	Average	20,126	28,027	—
July	12,940	21,483	26,390				

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Palestine

Official Estimates: Number Unemployed

Month	1929	1930	1931	1932	Month	1929	1930	1931	1932
January	4,300	2,850	14,200	23,400	August	2,700	4,300	36,350	19,400
February	3,900	3,200	13,600	21,350	September	2,500	4,300	37,400	20,330
March	4,000	2,900	14,000	21,100	October	2,300	5,450	27,500	15,120
April	3,400	3,400	14,000	14,950	November	2,300	6,900	21,600	—
May	3,450	2,850	17,400	15,400	December	2,250	13,750	24,400	—
June	3,450	3,200	32,500	19,200					
July	2,700	4,900	36,050	20,700	Average	3,104	4,833	24,083	—

Poland ¹

Employment Exchange Statistics: Unemployed Registered

Month	1927	1928	1929	1930	1931	1932
January	206,147	181,672	161,189	241,974	340,718	338,434
February	212,948	179,644	178,273	274,708	358,925	350,145
March	208,267	167,676	176,539	289,469	372,536	360,031
April	189,998	153,016	155,225	271,925	351,879	339,773
May	176,844	135,542	127,921	224,914	313,104	306,801
June	164,161	116,247	106,622	204,982	274,942	264,147
July	148,277	100,487	98,749	193,687	255,179	218,059
August	137,889	90,976	91,512	173,627	246,380	190,548
September	125,037	82,642	83,063	170,467	246,426	150,446
October	117,021	79,478	90,481	165,154	255,522	—
November	132,687	92,365	126,544	209,912	266,927	—
December	164,800	128,144	186,427	299,797	312,487	—
Average	165,340	125,657	131,879	226,659	299,502	—

¹ A new series was introduced in 1927. Until 1929 figures relate to the end of the last week in each month; since 1930 the figures relate to the end of each month.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Rumania

Employment Exchange Statistics: Unemployed Registered

Month	1928	1929	1930	1931	1932
January	14,288	11,506	12,622	38,804	56,612
February	15,555	13,081	15,588	43,270	57,606
March	19,387	10,365	13,045	48,226	55,306
April	11,493	8,851	13,410	41,519	47,206
May	10,022	6,215	25,096	33,484	39,654
June	8,818	5,562	22,949	27,869	33,679
July	6,768	3,756	23,142	20,250	—
August	7,265	3,675	27,479	22,708	—
September	9,418	5,165	38,208	22,969	—
October	6,581	5,481	34,499	28,800	—
November	7,830	6,934	42,633	43,917	—
December	7,040	6,866	35,326	49,393	—
Average	10,373	7,288	25,338	35,851	—

Saar Territory

Employment Exchange Statistics: Unemployed Registered¹

Month	1929	1930	1931	1932	Month	1929	1930	1931	1932
January	10,498	11,307	18,921	38,790	August	3,298	7,099	20,205	38,858
February	13,842	11,949	20,139	42,394	September	3,990	7,527	21,741	40,320
March	9,240	8,882	18,292	44,883	October	5,103	9,013	24,685	—
April	5,217	7,522	15,885	42,993	November	6,408	12,110	28,659	—
May	3,979	7,362	14,886	42,881	December	10,515	15,245	35,045	—
June	3,762	6,330	15,413	40,188	Average	6,591	9,286	20,963	—
July	3,238	7,088	17,685	39,063					

¹ The average number of unemployed registered in 1925 was 1,933; 1926, 2,393; 1927, 2,976; 1928, 3,871.

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued.)

Sweden

I. — Trade Union Returns: Number (a) and Percentages (b) Unemployed

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	29,926	14.8	34,601	15.7	39,344	16.3	37,135	14.3	43,424	14.8	45,636	13.9	70,437	20.2	93,273	24.4
February	27,934	13.6	32,695	14.8	39,772	15.6	35,183	13.3	44,254	14.6	45,460	13.2	66,923	18.7	93,900	23.7
March	25,824	12.0	34,712	14.7	36,103	14.1	36,732	13.2	44,250	13.7	42,278	12.3	72,944	19.4	98,732	24.4
April	22,437	10.8	29,220	12.3	31,882	12.3	32,218	11.7	35,989	11.4	38,347	10.8	64,534	17.1	79,804	21.1
May	16,920	8.2	22,413	9.9	25,460	9.9	22,978	8.2	24,452	7.7	28,112	8.0	49,807	13.2	75,650	18.9
June	17,709	8.2	22,715	9.6	24,999	9.4	21,237	7.6	21,764	6.8	28,956	8.0	45,839	12.4	77,137	19.1
July	16,252	7.6	20,206	8.6	21,254	8.3	20,238	7.4	20,048	6.3	27,170	8.0	46,180	11.8	75,622	19.1
August	16,728	7.7	19,511	8.3	20,163	7.9	19,826	6.9	19,914	6.1	28,539	8.1	48,590	12.8	80,975	20.0
September	19,802	8.5	22,114	9.1	22,347	8.4	22,188	7.8	22,271	6.7	34,063	9.5	54,405	13.4	84,432	20.3
October	23,500	10.1	28,390	11.4	27,385	10.4	32,008	9.0	27,529	8.2	45,501	12.3	68,490	16.4	—	—
November	27,428	11.8	23,500	13.0	33,563	12.8	32,229	10.9	33,581	10.1	56,573	15.3	79,484	19.3	—	—
December	45,900	19.5	47,950	19.1	50,655	18.6	49,533	17.3	53,377	16.3	82,655	22.9	110,449	26.0	—	—
Average	24,197	11.0	28,169	12.2	31,076	12.0	29,716	10.6	32,624	10.2	42,016	11.9	64,815	16.8	—	—

II. — Employment Exchange Statistics: Applicants for Work

Month	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
January	33,063	35,661	30,265	33,771	30,984	31,521	38,223	38,223	38,223	38,223	38,223	38,223	38,223	38,223	75,395	75,395
February	28,746	32,191	28,213	32,305	28,052	28,457	38,472	38,472	38,472	38,472	38,472	38,472	38,472	38,472	77,932	77,932
March	27,165	31,174	26,729	30,178	26,553	27,482	37,253	37,253	37,253	37,253	37,253	37,253	37,253	37,253	79,392	79,392
April	22,285	25,141	22,915	24,479	23,959	24,762	37,762	37,762	37,762	37,762	37,762	37,762	37,762	37,762	81,774	81,774
May	18,248	19,015	18,248	18,810	17,412	18,369	28,888	28,888	28,888	28,888	28,888	28,888	28,888	28,888	70,902	70,902
June	17,334	18,355	18,263	17,905	15,055	15,248	28,805	28,805	28,805	28,805	28,805	28,805	28,805	28,805	63,974	63,974
July	16,555	16,578	17,371	18,220	15,029	17,129	35,169	35,169	35,169	35,169	35,169	35,169	35,169	35,169	—	—
August	19,713	20,778	19,748	20,778	18,656	20,955	40,052	40,052	40,052	40,052	40,052	40,052	40,052	40,052	—	—
September	22,290	24,223	24,223	24,860	18,433	21,914	51,077	51,077	51,077	51,077	51,077	51,077	51,077	51,077	—	—
October	25,482	26,500	29,046	21,651	22,951	31,424	64,141	64,141	64,141	64,141	64,141	64,141	64,141	64,141	—	—
November	26,933	30,993	31,575	27,364	24,555	29,931	59,695	59,695	59,695	59,695	59,695	59,695	59,695	59,695	—	—
December	20,885	24,895	27,517	21,782	19,605	29,931	—	—	—	—	—	—	—	—	—	—
Average	23,200	25,476	24,576	24,399	21,770	25,156	40,938	40,938	40,938	40,938	40,938	40,938	40,938	40,938	—	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (continued)

Switzerland

I. — Unemployment Insurance Statistics: Number and Percentages of Wholly and Intermittently Unemployed

	1925		1926		1927		1928		1929		1930		1931		1932	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
A. — Wholly Unemployed																
March	—	—	4,156 ¹	2.7	5,312	2.8	4,803	1.9	4,435	1.6	7,882	2.6	18,991	5.7	40,423	9.0
June	—	—	3,849	2.4	3,909	1.6	3,027	1.2	2,059	0.7	5,368	1.7	12,577	3.6	33,742	7.1
September	—	—	4,804	2.8	4,311	1.7	2,873	1.1	2,332	0.8	7,792	2.5	15,188	4.0	—	—
December	—	—	10,043	5.6	11,306	4.5	10,619	4.0	12,309	4.2	21,400	6.6	41,611	10.1	—	—
Average	—	—	5,638	3.4	6,460	2.7	5,331	2.1	5,284	1.8	10,611	3.4	22,092	5.9	—	—
B. — Intermittently Unemployed																
March	—	—	4,156 ¹	2.7	6,833	3.0	2,553	1.0	4,483	1.7	12,642	4.2	41,880	12.6	62,659	14.0
June	—	—	5,855	3.7	4,168	1.7	2,002	0.8	2,834	1.0	17,688	5.7	34,266	9.7	53,120	11.3
September	—	—	7,369	4.5	3,725	1.5	2,535	1.0	2,549	0.9	26,111	8.3	42,928	11.2	—	—
December	—	—	8,148	4.6	4,231	1.7	3,621	1.4	9,805	3.3	33,483	10.4	61,256	14.9	—	—
Average	—	—	6,382	3.9	4,739	2.0	2,678	1.1	4,918	1.7	22,481	7.2	45,100	12.1	—	—

¹ Figures calculated by the International Labour Office on basis of percentages unemployed.

II. — Employment Exchange Statistics: Applicants for Work Registered

Month	1925	1926	1927	1928	1929	1930	1931	1932
January	12,184	20,525	19,370	14,212	16,284	14,846	27,316	57,857
February	11,834	18,138	19,201	12,017	15,979	13,462	26,886	63,708
March	10,185	14,307	13,568	8,265	7,098	10,138	19,919	52,288
April	8,591	11,320	11,220	6,910	5,382	8,791	16,036	44,958
May	7,189	10,703	9,547	6,410	5,049	9,545	14,365	41,798
June	8,084	10,272	7,735	5,378	4,999	9,002	14,433	41,441
July	9,751	11,013	8,404	5,525	4,801	10,161	17,975	45,448
August	9,895	11,818	8,854	6,523	4,611	10,351	18,506	47,064
September	10,356	12,803	8,355	6,125	5,197	11,613	19,789	49,532
October	12,219	14,253	9,873	7,636	6,799	15,268	27,783	—
November	15,760	16,366	12,079	9,571	8,657	18,354	36,920	—
December	17,027	17,900	13,701	11,993	13,320	23,045	50,570	—
Average	11,090	14,118	11,824	8,380	8,131	12,881	24,208	—

TABLE I. — GENERAL LEVEL OF UNEMPLOYMENT (concluded)

United States

Trade Union Returns: Unweighted Percentages of Wholly Unemployed

Month	1928	1929	1930	1931	1932	Month	1928	1929	1930	1931	1932
January	18	15	20	27	31	August	9	9	22	26	—
February	18	15	22	27	31	September	10	10	21	26	—
March	18	14	21	26	30	October	9	11	21	26	—
April	16	12	21	25	31	November	10	12	22	27	—
May	13	11	20	25	31	December	13	16	23	30	—
June	14	9	20	25	32						
July	12	9	22	26	34	Average	13	12	24	26	—

Yugoslavia

Employment Exchange Statistics: Unemployed Registered

Month	1928	1929	1930	1931	1932	Month	1928	1929	1930	1931	1932
January	—	10,490	8,508	11,903	19,665	August	4,606	5,790	6,411	7,466	—
February	18,968	13,995	9,437	14,424	21,435	September	3,639	6,755	5,976	7,753	—
March	7,582	11,953	9,739	12,029	20,089	October	3,744	4,739	6,609	10,070	—
April	9,123	9,915	12,052	11,391	18,532	November	4,485	5,026	7,219	10,349	—
May	6,820	10,583	8,704	6,929	13,568	December	5,832	5,663	9,800	14,502	—
June	5,696	9,017	6,991	6,182	—						
July	4,696	7,652	7,233	6,672	—	Average	6,781	8,465	8,198	10,018	—

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES *

Australia

Trade Union Statistics: Membership of Unions Reporting and Percentages Unemployed

Date	B Mining, quarrying, etc.	C Engineering, metal works, etc.	E Building	F Wood, furniture, etc.	G Books, printing, etc.	I Clothing, hats, boots, etc.	L Food, drink, tobacco etc.	M Land transport other than railway and tramway services	All unions reporting ¹
1927: 2nd qr.	11.0	4.3	6.7	3.2	1.6	2.2	8.9	4.9	6.4
4th qr.	18.6	8.7	10.0	6.3	2.2	6.4	8.3	6.1	8.9
1928: 2nd qr.	17.4	12.5	12.6	9.3	2.6	11.6	10.0	7.1	11.2
4th qr.	17.1	12.9	8.7	9.9	2.4	7.4	7.2	7.2	9.9
1929: 2nd qr.	12.0	9.4	8.8	13.6	3.2	10.2	11.4	8.4	10.0
4th qr.	8.6	15.4	14.3	15.5	3.3	10.0	12.8	9.0	13.1
1930: 2nd qr.	12.2	20.5	23.3	25.2	6.8	16.7	14.2	14.6	18.5
4th qr.	28.8	25.2	27.9	29.4	10.1	22.5	16.8	18.5	23.4
1931: 2nd qr.	32.7	30.2	32.6	33.3	14.4	26.7	20.7	24.0	27.6
4th qr.	33.5	31.2	36.0	34.8	15.0	23.7	20.8	25.2	28.0
1932: 1st qr.	33.5	31.1	37.9	36.6	15.4	22.8	17.1	27.3	28.3
2nd qr.	34.2	33.9	42.1	39.6	16.8	22.6	19.4	29.6	30.0
3rd qr.	—	—	—	—	—	—	—	—	—
4th qr.	—	—	—	—	—	—	—	—	—
Membership of unions reporting (Dec. 1930)	22,981	81,093	54,736	16,397	20,183	39,638	36,922	16,315	423,493 ²

¹ Including unions of workers in other manufacturing, railway and tramway service, shipping, agriculture, domestic service, hotels, etc.

² 4th quarter, 1931.

Austria

Employment Exchange Statistics: Applicants for Work Registered

Date	A Agriculture, etc.	B Mining, including extraction of salt	C Metals, metal working, mechanical and electrical engineering	D Brick, pottery and glass	E Building	F Wood (including furniture)	G Paper and printing	H Textiles	I Clothing
1927: June	895	1,832	26,117 ¹	2,053	14,598	8,034	2,727	5,746	11,638
Dec.	1,893	1,749	25,966	5,996	50,166	8,388	2,453	4,861	16,366
1928: June	1,411	1,269	19,128	1,362	9,564	5,177	2,150	6,086	11,970
Dec.	2,783	1,580	22,106	7,216	51,076	7,730	2,625	7,000	17,144
1929: June	2,138	1,443	23,670	3,176	20,775	7,286	5,093	9,931	12,370
Dec.	5,836	2,035	35,064	13,084	91,695	11,775	6,800	13,153	16,450
1930: June	2,897	2,159	40,081	4,381	32,831	9,881	6,685	15,147	11,910
Dec.	8,294	3,390	50,649	17,890	108,337	18,670	10,623	19,736	21,699
1931: June	4,998	4,335	48,373	7,240	45,037	15,241	8,879	17,744	16,308
Dec.	9,300	4,701	62,742	20,489	120,922	22,135	12,970	18,487	26,688
1932: March	10,405	4,904	71,121	20,633	117,881	25,468	14,878	19,264	25,814
June	6,770	4,896	67,797	10,531	66,724	21,616	13,517	21,842	25,401
Sept.	7,157	4,560	68,429	13,162	75,981	22,259	14,356	22,030	25,373
Dec.	—	—	—	—	—	—	—	—	—

¹ 1927, 1928 excluding electrical engineering.

* For explanation of A, B, C, etc., see p. 122.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Austria (*continued*)

Employment Exchange Statistics (*continued*)

Date	J Skin, leather and rubber	K Chemicals	L Food, drink and tobacco	M Transport	O Water and electricity works	R Public admini- stration	S Com- merce, banking and insur- ance ¹	T Hotels, dome- stic service, laun- dries, etc. ²	All indus- tries ³
1927: June	2,019	1,068	5,831	2,121	—	—	17,383	8,666	168,997
Dec.	2,026	1,053	6,101	2,180	—	—	16,330	12,958	238,073
1928: June	1,938	936	5,447	1,679	—	—	15,880	6,991	140,931
Dec.	2,152	1,024	6,731	2,444	—	—	14,892	14,072	237,661
1929: June	2,885	2,499	9,274	3,249	273	1,863	13,396	10,869	133,106
Dec.	3,762	4,533	10,409	10,369	532	2,918	14,247	20,607	265,684
1930: June	4,040	3,079	10,016	4,243	353	2,716	14,177	10,681	179,610
Dec.	5,062	4,264	11,859	11,595	616	4,177	15,065	22,757	341,073
1931: June	4,183	3,522	11,453	6,195	377	3,087	13,708	12,423	229,240
Dec.	5,452	4,613	14,540	13,852	549	5,366	17,069	25,443	395,981
1932: March	5,926	5,131	18,236	15,178	638	5,356	19,470	25,553	417,178
June	5,576	4,164	15,127	10,636	491	4,409	18,983	18,281	327,531
Sept.	5,137	4,089	14,869	11,222	497	4,662	19,970	19,545	345,148
Dec.	—	—	—	—	—	—	—	—	—

¹ 1927, 1928 commercial employees only.

² 1927, 1928 hotels and domestic service only.

³ Including certain minor categories of miscellaneous workers, not specified in the table above, and during 1927 and 1928 also the categories of workers mentioned in the preceding footnotes.

Belgium

Voluntary Unemployment Insurance Statistics: Membership of Funds Reporting and Percentages of Wholly (Wh.) and Intermittently (Int.) Unemployed

Date	B				C		D				E	
	Mining		Quarrying		Metals		Pottery, etc.		Glass		Building and construction	
	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.
1927: June	0.0	3.0	1.7	1.4	1.3	3.3	0.2	0.6	3.3	0.9	1.8	0.9
Dec.	0.2	9.8	3.6	12.2	1.6	2.6	19.8	9.4	0.9	0.9	23.7	8.4
1928: June	0.1	0.3	0.8	0.5	0.3	1.3	0.1	0.3	3.1	2.8	0.4	0.3
Dec.	0.0	2.6	0.9	2.6	0.8	2.2	5.7	8.0	2.2	0.3	15.0	3.9
1929: June	0.0	0.0	0.0	0.0	0.2	0.8	0.0	0.0	2.6	0.2	0.1	0.0
Dec.	0.0	0.0	0.0	0.7	0.1	3.8	1.6	4.9	15.2	2.7	5.5	2.5
1930: June	0.3	0.5	0.3	2.0	2.0	5.2	2.1	2.9	9.6	1.2	2.8	0.5
Dec.	0.4	6.2	7.3	28.4	7.1	18.0	27.5	12.4	10.5	13.6	19.5	3.7
1931: June	0.3	2.9	4.8	13.3	10.3	21.1	12.5	14.4	8.4	32.7	11.5	2.8
Dec.	2.9	27.2	18.8	21.4	16.5	26.1	29.9	15.6	11.2	3.1	28.3	5.9
1932: March	4.0	40.7	18.1	42.6	18.6	24.6	34.4	18.7	12.9	34.4	30.7	6.4
June	7.0	39.8	19.0	34.0	20.3	25.2	22.8	8.8	18.3	34.0	21.6	4.6
Sept.	5.0	23.4	19.8	28.2	21.2	20.1	27.3	13.9	18.2	31.3	23.0	5.9
Dec.	—	—	—	—	—	—	—	—	—	—	—	—
Membership of funds reporting (Sept. 1932)	82,334		28,374		197,495		16,358		19,644		87,337	

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Belgium (*continued*)

Voluntary Unemployment Insurance Statistics (continued)

Date	F		G				H		I		J	
	Wood (incl. furniture)		Paper		Printing		Textiles		Clothing		Leather and skins	
	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.
1927: June	2.0	1.0	0.0	2.2	5.1	3.5	0.4	3.2	1.3	3.1	5.8	6.9
Dec.	6.1	1.3	0.2	4.1	2.9	0.9	1.1	6.0	4.5	2.8	1.4	5.8
1928: June	0.8	0.7	0.1	2.0	1.8	2.7	0.5	7.3	0.7	2.2	0.7	10.0
Dec.	1.9	1.9	0.2	5.1	0.9	0.2	0.8	8.5	1.2	7.1	1.0	10.5
1929: June	0.4	0.3	0.0	1.4	0.5	1.3	0.4	3.4	0.4	2.9	0.2	9.8
Dec.	2.2	1.4	0.1	5.1	1.1	0.2	1.8	8.6	3.7	5.2	1.5	9.7
1930: June	2.6	2.1	0.4	4.3	0.9	0.7	1.4	14.4	1.9	1.7	1.7	14.0
Dec.	17.6	9.6	2.1	26.0	2.4	2.2	6.7	32.2	10.0	14.4	6.3	26.3
1931: June	12.9	5.4	2.7	17.6	6.4	2.6	7.0	18.9	5.0	5.0	5.5	2.6
Dec.	23.6	12.4	4.2	42.6	8.3	2.9	17.4	30.5	16.0	17.4	15.7	30.7
1932: March	25.7	10.1	9.7	44.8	11.2	6.1	20.5	31.4	10.6	14.9	15.8	31.7
June	23.8	9.8	12.0	36.7	14.5	7.9	19.1	27.8	11.0	11.6	16.6	33.0
Sept.	26.1	10.6	14.5	37.8	12.9	6.5	16.8	29.3	11.2	16.8	17.3	30.2
Dec.	—	—	—	—	—	—	—	—	—	—	—	—
Membership of funds reporting (Sept. 1932)	41,211		4,150		14,599		190,376		5,431		16,688	

Date	K		L				M		All funds reporting ¹	
	Chemicals		Food		Tobacco		Transport			
	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.	Wh.	Int.
1927: June	8.6	24.6	0.7	1.6	1.7	7.5	0.8	15.4	1.4	3.3
Dec.	1.7	30.6	1.8	1.9	2.0	2.8	0.9	11.2	3.6	5.6
1928: June	1.0	7.9	0.4	0.6	2.8	8.9	0.3	10.6	0.6	3.0
Dec.	0.1	17.0	0.8	3.3	2.6	3.6	0.2	10.1	1.9	4.5
1929: June	0.0	6.9	0.4	0.4	0.8	1.4	0.0	11.4	0.4	1.8
Dec.	4.9	16.6	2.3	2.2	3.7	8.5	0.2	15.2	2.4	4.6
1930: June	0.6	9.2	0.7	1.9	7.7	4.5	1.1	31.6	1.9	6.5
Dec.	3.5	27.1	3.0	4.0	3.1	9.3	3.7	27.3	9.2	17.0
1931: June	10.1	20.7	4.1	4.5	6.5	1.8	12.2	36.2	9.0	14.5
Dec.	8.2	6.9	5.4	8.2	7.1	18.1	21.5	34.9	17.0	21.5
1932: March	17.2	22.9	7.6	9.7	13.7	34.8	27.3	36.6	19.3	23.4
June	14.7	30.5	8.0	10.5	15.0	32.3	35.0	28.0	18.7	21.8
Sept.	18.1	12.9	9.5	7.1	12.4	29.3	38.7	24.2	18.3	18.9
Dec.	—	—	—	—	—	—	—	—	—	—
Membership of funds reporting (Sept 1932)	4,765		16,414		7,410		30,506		890,034	

¹ Including other trades.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Czechoslovakia

Employment Exchange Statistics: Unemployed Registered

Date	A	B	C	D	E	F	G	H
	Agriculture	Mining	Metals, metal working, mechanical engineering	Brick, pottery and glass	Building	Wood (including furniture)	Paper	Textiles
1927: June	2,414	595	6,657	1,237	2,286	1,725	1,464	3,433
Dec.	1,952	545	4,406	1,454	7,035	1,950	975	2,262
1928: June	1,466	283	2,527	529	755	897	905	6,740
Dec.	1,878	284	2,489	977	6,932	1,415	627	7,240
1929: June	1,772	254	2,467	683	1,487	1,423	951	5,002
Dec.	2,021	197	6,858	1,364	7,666	1,935	1,265	7,449
1930: June	2,674	517	12,446	3,236	5,935	2,552	1,944	12,791
Dec.	6,832	2,242	28,721	12,738	36,273	8,880	3,603	32,643
1931: June	7,684	4,285	31,461	13,856	17,221	7,967	4,189	37,829
Dec.	22,031	6,692	56,796	37,696	63,324	16,647	5,766	60,596
1932: March	37,715	8,312	72,973	47,900	80,312	23,733	9,369	74,683
June	33,439	16,994	62,273	37,141	31,296	17,518	8,920	74,745
Sept.	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—

Date	I	J	K	L	M	T	V	All industries ¹
	Clothing	Rubber, hair and leather	Chemicals	Food, drink and tobacco	Transport	Hotels, domestic service	Professional services	
1927: June	1,742	226	311	2,555	640	3,290	364	45,460
Dec.	1,702	195	428	2,305	613	3,566	504	45,571
1928: June	1,104	225	369	1,768	209	2,801	839	32,701
Dec.	1,301	185	329	1,968	479	2,678	812	39,400
1929: June	838	554	445	2,045	223	2,825	839	34,434
Dec.	1,615	336	330	2,629	516	3,277	933	52,809
1930: June	1,637	527	423	2,657	541	3,786	825	73,464
Dec.	6,303	1,099	2,214	5,225	1,398	6,903	1,547	238,904
1931: June	5,358	1,016	1,698	4,896	804	6,506	2,316	220,025
Dec.	12,676	2,505	3,643	7,575	2,370	11,210	3,053	486,363
1932: March	17,285	3,083	5,128	9,060	3,450	14,351	3,505	633,907
June	12,928	2,726	3,999	6,983	2,351	10,873	3,692	466,948
Sept.	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—

¹ Including commercial employees, miscellaneous industries, day labourers and apprentices.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Denmark

Trade Union Fund Returns: Membership of Unemployment Funds Reporting and Percentages Unemployed

Date	A	C	D	E			F		G	
	Agricultural workers	Smiths and mechanics	Potters	Masons	Carpenters	Painters	Woodworkers	Joiners	Paperworkers	Printers
1927: June	12.2	21.8	12.4	9.2	21.6	10.9	18.9	36.1	5.5	12.6
Dec.	29.3	28.2	41.9	78.4	56.4	59.4	46.5	47.4	4.7	14.0
1928: June	9.6	16.3	6.0	2.5	8.9	4.6	13.2	24.6	2.6	10.3
Dec.	24.8	22.6	41.7	52.9	44.6	58.9	54.1	37.5	3.2	13.0
1929: June	5.7	10.9	2.5	0.2	2.8	2.8	8.1	17.9	3.3	11.3
Dec.	18.3	16.4	33.1	33.0	33.9	49.1	45.5	30.1	2.5	12.2
1930: June	3.8	8.3	1.7	0.5	1.6	1.9	7.6	13.0	0.8	9.2
Dec.	21.5	24.0	41.5	42.2	33.3	48.4	57.1	28.8	3.4	10.9
1931: June	4.1	16.6	6.9	0.3	3.2	3.6	10.7	15.8	1.4	8.8
Dec.	45.8	33.7	22.5	52.7	42.8	57.0	39.4	35.4	2.7	14.5
1932: March	69.2	37.7	12.5	60.0	52.3	37.7	29.2	37.8	1.6	16.3
June	19.0	36.5	15.9	40.0	36.8	17.0	28.0	44.0	2.2	15.9
Sept.	41.0	38.4	20.0	43.4	45.6	39.1	33.1	46.2	3.7	18.1
Dec.	—	—	—	—	—	—	—	—	—	—
Membership of funds reporting (Sept. 1932)	15,500	29,916	1,338	8,322	7,660	6,270	4,089	8,724	1,461	6,072

Date	H	I		L		N	S	All funds reporting ¹
	Textile workers	Tailors	Shoemakers	Bakers and confectioners	Tobacco workers	Seamen	Commercial workers	
1927: June	20.4	14.8	30.8	25.4	22.9	18.0	13.0	18.0
Dec.	22.4	28.5	25.5	30.1	45.6	22.4	12.8	31.6
1928: June	17.4	12.3	31.8	25.5	21.3	13.5	11.1	13.5
Dec.	26.3	19.2	29.8	28.6	68.1	17.1	9.6	28.4
1929: June	7.4	6.9	24.1	24.7	9.4	10.1	9.7	10.0
Dec.	24.8	13.8	24.1	27.0	41.0	14.1	8.2	22.4
1930: June	9.6	7.0	18.5	22.2	11.0	11.8	7.2	8.7
Dec.	28.8	19.6	39.9	27.9	27.8	22.2	6.8	25.1
1931: June	9.8	7.3	22.2	19.7	13.9	19.5	7.0	11.3
Dec.	14.2	14.9	24.5	27.7	74.8	29.7	9.5	32.2
1932: March	7.2	14.7	22.1	29.5	28.1	35.9	13.3	35.8
June	12.4	13.1	33.5	26.3	24.5	29.9	12.4	24.9
Sept.	7.8	17.1	16.9	32.5	19.3	32.5	14.9	29.6
Dec.	—	—	—	—	—	—	—	—
Membership of funds reporting (Sept. 1932)	10,329	9,866	3,997	4,654	7,978	3,563	14,678	317,794

¹ Including general labourers and other occupations.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Germany

Trade Union Returns: Membership of Unions Reporting and Percentages of Wholly (Wh.) and Partially (Ptl.) Unemployed

Date	B		B, D		C		E		F		G			
	Mining		Stone and earth		Engineering and metal working		Building		Wood		Paper		Printing, etc.	
	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.
1927: June	1.4	5.5	4.2	1.1	8.0	2.8	5.3	0.1	10.8	3.7	6.8	8.4	3.2	0.7
Dec.	2.3	4.3	17.6	3.3	5.1	2.1	49.0	0.2	10.4	3.1	5.3	5.5	3.5	0.4
1928: June	1.3	4.6	5.4	2.0	4.8	3.9	8.0	0.0	10.1	5.0	4.4	5.2	3.8	0.5
Dec.	2.0	8.2	25.6	6.7	8.4	7.4	50.6	1.3	17.2	6.3	6.3	5.9	6.7	0.6
1929: June	1.4	1.7	7.3	3.9	7.2	7.4	10.4	0.0	15.0	6.6	8.8	10.6	7.9	0.8
Dec.	2.9	1.7	34.3	6.5	12.7	12.5	52.8	2.5	23.9	7.6	10.6	8.5	12.0	1.7
1930: June	6.4	19.9	24.8	10.1	17.5	19.5	38.0	0.2	30.4	14.0	15.2	19.1	14.3	3.0
Dec.	9.9	24.7	51.7	12.3	26.8	25.8	65.4	1.4	45.4	13.5	20.2	21.5	21.6	6.0
1931: June	13.4	26.2	40.8	11.5	28.7	25.7	56.6	0.4	46.9	10.9	22.7	22.6	23.5	7.6
Dec.	16.5	32.3	65.1	12.6	39.5	30.7	85.4	0.6	61.5	10.1	30.7	31.1	33.0	16.9
1932: March	18.8	36.9	64.5	11.9	43.6	29.1	88.7	0.4	63.5	11.2	34.0	34.4	35.0	15.9
June	18.2	35.3	55.6	12.7	45.0	27.8	78.0	0.3	65.5	9.7	34.2	32.4	35.7	16.0
Sept.	18.2	34.2	55.9	14.5	46.1	26.9	77.8	0.3	65.6	16.8	35.9	32.3	37.3	17.9
Dec.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Membership of union reporting (Sept. 1932.)	139,700		161,700		769,000		502,100		241,000		92,500		142,700	

Date	H		I		J		K		L		M		All unions reporting ³	
	Textiles		Clothing ¹		Leather ²		Chemicals		Food, drink, tobacco		Transport ²			
	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.
1927: June	3.0	2.3	12.9	5.3	9.8	6.1	7.4	2.4	8.0	4.9	6.9	3.9	6.3	2.7
Dec.	2.7	4.8	18.3	11.9	10.1	17.9	8.3	3.0	8.1	4.1	5.5	1.5	12.9	3.1
1928: June	6.7	23.3	16.2	31.6	12.5	19.8	4.8	4.1	6.5	4.3	4.3	0.9	6.2	5.9
Dec.	7.8	25.1	24.5	27.3	15.0	19.3	7.6	4.2	11.4	6.0	5.2	1.1	16.7	7.5
1929: June	9.8	26.9	18.6	21.5	17.3	15.2	5.7	2.4	9.3	7.3	5.5	0.6	8.5	6.7
Dec.	11.6	23.2	23.7	24.3	20.8	14.7	12.1	8.4	12.9	6.6	6.2	0.7	20.1	8.5
1930: June	14.3	33.8	23.6	23.8	26.5	18.1	14.0	12.1	13.3	10.5	—	—	19.6	12.6
Dec.	20.3	43.3	35.4	39.4	33.2	24.7	21.6	19.8	26.3	14.6	—	—	31.7	16.9
1931: June	20.6	35.3	33.0	33.8	35.0	23.6	21.7	20.8	18.1	15.4	—	—	29.7	17.7
Dec.	26.9	38.5	41.4	35.8	42.2	19.8	31.9	38.1	31.1	31.7	—	—	42.2	22.3
1932: March	30.7	41.3	39.2	31.4	46.6	25.2	32.5	34.8	31.9	34.2	—	—	44.6	22.6
June	33.0	45.0	32.0	33.4	46.9	21.5	32.5	32.8	29.8	31.8	—	—	43.1	22.4
Sept.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Membership of unions reporting (Sept. 1932)	257,700		122,600		45,900		88,900		220,900		—		3,132,500	

¹ Since June 1928, the shoemakers' union, and since January 1931 the Christian leather workers' union (which organises mainly shoemakers), are included under "Clothing" instead of "Leather".

² Since January 1930 transport workers are included under "Other trades".

³ Including hairdressers, machinists and stokers, transport workers, workers on public works, and other factory workers and labourers (not included in any other group).

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)
Great Britain and Northern Ireland
Compulsory Unemployment Insurance Statistics: Number of Persons Insured and Percentages Unemployed

Date	B		C			D	E	F	G	
	Coal mining	Steel smelting and iron puddling, iron and steel rolling and forging	General engineering, engineers' iron and steel founding	Motor vehicles, cycles and aircraft (construction and repair)	Ship building and repairing	Brick, tile, etc., making	Building	Furniture making, upholstering, etc.	Paper, paper board	Printing, publishing, book-binding
1927: June	19.0	16.8	9.4	5.7	22.9	5.2	6.9	4.7	6.3	4.6
Dec.	17.3	22.7	9.4	6.9	21.5	11.7	16.0	3.9	4.4	3.9
1928: June	25.7	20.5	9.5	7.9	26.5	10.1	10.0	5.5	3.9	3.8
Dec.	19.1	19.8	9.8	6.5	30.3	13.3	15.2	4.8	3.8	4.1
1929: June	19.0	19.3	8.8	6.1	22.5	8.6	8.5	5.8	4.1	3.9
Dec.	14.6	22.0	10.3	7.3	23.3	12.1	16.9	5.3	4.3	4.4
1930: June	23.9	29.8	15.7	13.1	30.7	12.0	12.7	10.0	9.1	5.9
Dec.	19.7	50.6	24.7	16.2	45.1	18.3	22.7	13.3	13.8	8.2
1931: June	36.2	48.2	28.4	21.2	56.6	15.8	18.1	16.9	14.4	9.7
Dec.	24.6	45.4	26.8	22.2	60.1	20.1	28.6	16.9	10.0	10.8
1932: March	26.9	46.7	27.2	19.6	58.6	21.9	29.0	20.3	10.6	11.2
June	40.7	48.2	29.0	22.2	62.9	21.2	26.1	20.5	11.9	10.1
Sept.	38.8	47.1	30.8	20.0	63.9	23.4	28.8	19.7	12.1	10.1
Dec.	—	—	—	—	—	—	—	—	—	—
Number insured (July 1932)	1,044,830	167,760	551,200	252,080	181,930	87,650	856,910	133,870	59,150	284,770

Date		H	I		J.	K	L	M		N
		Cotton trade	Tailoring	Boots, shoes, slippers, clogs	Leather: tanning, currying, dressing	Chemicals	Bread, biscuits, cakes, etc.	Railway service ¹	Tramways and omnibus	Shipping service ¹
1927: June	Dec.	7.0	3.1	6.5	7.4	6.4	6.0	4.2	2.8	14.8
		10.0	8.8	6.6	5.5	5.8	5.9	5.3	3.2	17.3
1928: June	Dec.	12.9	4.3	14.1	6.5	6.2	6.4	4.9	2.7	14.9
		11.1	11.2	16.1	10.0	6.2	7.2	7.9	3.5	18.8
1929: June	Dec.	13.7	4.4	13.5	9.7	6.1	6.3	4.6	2.4	15.3
		14.4	11.1	11.5	11.4	6.9	7.6	6.3	3.7	20.5
1930: June	Dec.	41.5	7.4	16.9	13.6	11.8	9.1	6.3	3.4	21.5
		47.4	16.8	25.6	16.4	17.9	11.7	11.7	5.2	33.0
1931: June	Dec.	40.4	10.9	20.1	18.9	18.8	11.9	10.8	4.6	29.6
		27.4	17.5	19.5	15.8	18.3	12.7	13.6	6.2	34.7
1932: March	June Sept. Dec.	23.4	11.4	20.5	17.1	16.9	12.5	15.9	6.6	33.3
		32.3	12.0	22.1	18.1	16.4	11.2	15.4	5.3	32.3
		34.8	19.7	19.9	14.8	16.4	11.7	17.5	5.8	33.5
		—	—	—	—	—	—	—	—	—
Number insured (July 1932)		517,950	211,660	137,970	42,480	99,120	159,250	134,450	180,510	161,330

¹ Mostly non-permanent staff.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)
Great Britain and Northern Ireland (*continued*)
Compulsory Unemployment Insurance Statistics (continued)

Date	O	R	S		T	U	V	All trades ¹
	Gas, water, electricity supply	Local Government	Commerce, banking, insurance, finance	Distributive trades	Hotel, etc., boarding house, club services	Entertainments, sports	Professional services	
1927: June	4.5	6.6	2.2	4.7	6.0	8.7	2.4	8.9
Dec.	5.4	9.1	2.3	4.8	8.9	9.3	2.5	9.8
1928: June	5.7	7.7	2.1	5.2	6.1	9.3	2.4	10.8
Dec.	6.1	10.4	2.5	5.8	10.8	10.8	2.9	11.2
1929: June	5.6	7.5	2.5	5.5	6.5	10.3	2.9	9.6
Dec.	6.5	11.1	2.8	6.4	11.9	13.5	3.4	11.1
1930: June	7.0	9.5	3.5	8.1	11.3	16.0	3.9	15.4
Dec.	8.6	13.4	4.4	9.8	18.2	20.7	4.9	20.2
1931: June	8.4	12.1	5.4	10.8	15.3	20.6	5.2	21.2
Dec.	9.9	17.7	6.2	12.1	20.9	22.5	6.2	20.9
1932: March	10.9	19.0	6.3	12.9	18.1	22.0	6.8	20.8
June	10.9	16.8	5.5	11.5	15.0	19.1	5.9	22.2
Sept.	11.1	18.8	5.4	12.3	16.4	19.8	6.2	22.8
Dec.	—	—	—	—	—	—	—	—
Number Insured (July 1932)	174,210	339,790	213,130	1,950,240	381,930	97,530	137,160	12,808,000

¹ This column relates to all trades insured; the rest of the table relates to selected trades only.

Italy

Social Insurance Fund Statistics: Wholly Unemployed

Date	A	B	C	E	H-I	K	L	O-Q	R	All industries ¹
	Agriculture, etc.	Mining and quarrying	Metals, metal working, mechanical engineering	Building and constructive works	Textiles and clothing	Chemicals	Food	Public utilities	Public services	
1927: June	23,764	2,854	23,704	43,642	63,459	3,365	23,883	12,657	5,587	214,603
Dec.	130,842	11,984	37,227	125,167	39,092	5,279	29,231	16,826	5,116	414,283
1928: June	27,344	8,955	28,995	62,580	51,025	3,764	30,223	13,327	3,775	247,021
Dec.	105,069	10,092	24,617	115,328	44,650	4,176	24,097	13,618	6,761	363,551
1929: June	29,051	6,231	19,023	39,438	50,239	3,123	21,619	10,239	4,060	193,325
Dec.	119,289	10,805	30,018	108,726	56,191	6,101	28,385	27,810	7,586	408,748
1930: June	32,325	8,571	28,910	71,968	84,132	4,356	42,323	27,968	5,389	322,291
Dec.	178,009	16,992	45,208	178,875	94,594	9,255	49,801	33,707	12,105	642,169
1931: June	58,027	18,083	60,029	164,484	113,467	10,738	63,641	42,005	12,928	573,593
Dec.	236,043	26,054	83,166	303,497	128,401	14,198	75,500	52,124	19,412	982,321
1932: March	247,120	27,826	89,454	332,876	133,765	13,629	82,003	53,603	21,789	1,053,016
June	119,448	31,645	91,332	251,624	164,167	14,781	108,330	53,471	20,651	905,097
Sept.	—	—	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—	—	—

¹ Including non-manual and unspecified workers.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)
Netherlands
*Voluntary Unemployment Insurance Statistics: Membership of Funds Reporting and Percentages Unemployed*¹

Date	A	B	C	D		E	F	G
	Agriculture	Coal mining	Metal industry, ship-building	Pottery	Diamond working	Building and construction	Wood-working, etc.	Printing etc.
1927: June	2.5	0.1	6.1	0.6	34.2	8.5	5.5	6.3
Dec.	30.5	0.6	7.1	26.6	10.0	40.0	12.0	4.9
1928: June	2.1	0.1	3.9	1.3	30.3	7.0	4.2	4.6
Dec.	22.1	0.4	4.4	29.2	14.1	27.2	8.4	3.8
1929: June	1.6	0.02	2.7	0.04	19.5	2.1	3.2	3.2
Dec.	20.7	0.1	3.9	21.0	88.5	24.5	8.0	2.6
1930: June	2.2	0.3	6.6	1.1	65.7	6.2	4.2	2.9
Dec.	26.9	0.3	16.9	36.3	78.6	30.2	19.5	3.6
1931: June	2.5	0.2	22.5	1.6	86.6	9.2	13.9	4.8
Dec.	31.7	14.2	35.6	34.9	84.5	39.1	35.6	8.4
1932: March	35.7	36.6	40.6	13.9	90.2	41.6	34.0	10.9
June	—	38.9	38.8	—	87.1	32.7	31.9	13.5
Sept.	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—
Membership of funds reporting (June 1932)	—	18,508	84,551	—	5,601	92,062	18,142	21,265

Date	II	I	J	L	M, N	S	All funds reporting ²
	Textiles	Clothing	Leather	Food, drink, tobacco	Transport	Commerce	
1927: June	2.2	6.5	5.4	10.4	2.5	5.0	6.0
Dec.	1.6	14.7	3.1	7.3	13.0	4.5	14.9
1928: June	1.9	6.7	2.4	6.1	2.2	3.8	4.4
Dec.	3.0	17.4	3.3	6.7	11.3	3.4	11.5
1929: June	2.6	6.2	2.2	4.2	1.4	3.4	2.6
Dec.	5.1	11.2	3.0	4.0	11.2	3.4	12.3
1930: June	10.0	8.1	2.1	5.2	2.0	3.1	5.5
Dec.	16.5	18.4	10.2	9.1	12.6	3.7	18.2
1931: June	21.0	7.2	12.2	9.9	10.2	4.4	11.7
Dec.	26.9	25.2	30.4	13.2	24.1	5.9	27.8
1932: March	27.3	12.1	8.0	17.5	22.1	7.1	29.3
June	36.4	11.7	13.4	18.0	19.1	9.1	27.2
Sept.	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—
Membership of funds reporting (June 1932)	71,654	8,900	5,105	31,926	73,443	41,293	514,641

¹ Including a certain number of trade union members not insured in the unemployment funds.

² Other unions than those specified in the table, e.g. those of fishermen, musicians, general workers, etc., are included in the totals.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

New Zealand ¹

Employment Exchange Statistics: Applicants for Work Registered ²

Date	A	C	E	M	S	T	All industries and professions ³
	Farm hands	Engineering	Building	Drivers	Clerks, salesmen and shop assistants	Hotel and Restaurants	
1931: June	2,294	1,894	4,768	1,701	2,095	794	43,453
Dec.	1,914	1,749	4,989	1,800	2,114	534	47,096
1932: March	1,706	1,783	4,839	1,670	1,784	606	44,368
June	3,149	2,164	6,589	2,320	2,495	832	54,122
Sept.	3,150	2,211	7,353	2,480	2,514	929	56,498
Dec.	—	—	—	—	—	—	—

¹ New series since 1931.

² Including persons receiving partial employment under Unemployment Board's schemes for relief.

³ Including other skilled tradesmen; storemen and packers; labourers and quarrymen; and others. Inclusive also of returns where details as to occupation are missing.

Norway

Trade Union Fund Returns Statistics: Percentage Unemployed

Date	C	E		F	G	I	L	All professions
	Iron and metal workers	Masons	Building workers ¹	Planers	Printers	Boot and shoe-makers	Bakers	
1927: June	22.1	19.6	30.1	20.1	10.4	25.5	15.2	22.5
Dec.	27.1	35.9	38.7	41.7	16.2	14.4	21.4	28.0
1928: June	13.0	7.6	19.7	14.7	9.3	10.3	13.7	14.4
Dec.	14.8	27.3	34.7	38.2	11.2	21.4	22.2	22.1
1929: June	7.5	10.5	13.7	20.1	8.3	10.5	11.6	11.3
Dec.	13.2	19.3	28.6	39.6	11.9	9.0	20.8	18.9
1930: June	9.1	5.9	13.2	18.8	6.8	8.2	10.5	10.8
Dec.	23.6	32.0	33.7	33.9	12.4	22.1	20.2	25.5
1931: June	18.8	—	26.0	18.4	9.6	11.3	14.2	— ²
Dec.	25.9	24.4	36.3	45.3	9.7	13.8	21.8	27.2
1932: March	29.1	—	44.7	—	—	11.3	—	32.5
June	29.3	—	25.6	—	—	17.7	—	26.2
Sept.	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—

¹ Exclusive of masons.

² Figures not available owing to strike.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Poland

Employment Exchange Statistics: Unemployed Registered

Date	A	B	C	E	H	T, M	Y	All industries and professions ²
	Agri-cultural workers	Mining	Metals, metal working ¹	Building	Textiles	Domestic and transport workers	Non-manual workers	
1927: June	2,286	25,303	15,920	7,770	18,612	4,145	19,629	174,349
Dec.	1,334	18,135	11,175	7,860	13,769	3,467	15,573	136,738
1928: June	1,639	16,741	9,813	6,508	14,327	2,586	13,773	132,453
Dec.	1,154	10,171	6,531	4,457	10,021	2,152	10,486	94,132
1929: June	1,882	2,671	6,581	4,953	20,904	1,771	9,736	105,065
Dec.	1,822	2,341	12,194	22,320	25,939	2,891	13,445	185,314
1930: June	1,064	9,226	18,997	12,655	25,802	3,058	17,357	204,982
Dec.	1,076	7,900	26,527	31,814	38,380	3,941	21,309	299,797
1931: June	2,955	13,660	27,595	20,582	21,230	3,715	28,642	274,942
Dec.	2,435	13,790	35,162	35,176	39,128	4,801	41,071	312,487
1932: March	3,739	19,335	44,387	39,759	29,138	5,804	46,671	360,031
June	1,588	23,401	39,541	22,614	25,058	4,020	40,007	264,147
Sept.	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—

¹ Since June 1932 including glass industry.

² Including other professional groups, unskilled and juvenile workers.

Rumania

Employment Exchange Statistics: Unemployed Registered

Date	A	B	C	D	E	F	G
	Forestry	Mining (including oil wells)	Metal working mechanical and electrical engineering	Glass and pottery	Building and public works	Wood (including furniture)	Paper and printing
1928: June	6,687	51	318	12	273	176	142
Dec.	1,717	248	904	8	430	639	145
1929: June	1,603	72	478	7	400	415	218
Dec.	2,080	—	135	—	1,278	211	174
1930: June	12,196	1,074	1,709	—	1,333	1,288	317
Dec.	8,339	1,925	4,066	236	3,465	3,164	881
1931: June	7,214	3,067	2,632	240	1,928	2,513	298
Dec.	9,294	4,744	4,875	249	3,939	2,427	1,123
1932: March	7,422	6,416	6,683	296	4,426	2,616	1,241
June	5,213	4,789	4,231	165	2,319	1,874	1,145
Sept.	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Rumania (*continued*)
Employment Exchange Statistics (continued)

Date	II	I	Y	L	R, S	T	All industries ¹
	Textiles	Clothing	Skin leather	Food	Public and private administration and commerce	Hotels and restaurants, domestic service	
1928: June	72	58	137	102	127	237	8,818
Dec.	122	213	204	207	416	303	7,016
1929: June	37	407	416	344	294	160	5,562
Dec.	36	207	246	185	383	390	6,866
1930: June	616	281	818	332	543	465	22,949
Dec.	732	1,054	1,223	750	1,088	788	35,326
1931: June	871	938	970	471	—	1,250	27,869
Dec.	1,121	1,438	1,991	889	1,732	1,599	49,363
1932: March	914	1,993	2,425	1,077	2,795	1,790	55,306
June	423	1,089	1,205	696	1,264	1,219	33,679
Sept.	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—

¹ Including watch industry, education and health, apprentices, miscellaneous and unskilled factory workers.

Sweden

Trade Union Returns: Membership of Unions Reporting and Percentages Unemployed

Date	B	C			D		E		
	Mining workers	Metal workers		Foundry workers	Stone industry workers	Carpenters	Bricklayers	Painters	Construction workers
		Iron	Mechanical engineering						
1927: June	10.5	9.1	8.9	9.2	5.9	15.6	4.7	6.2	16.0
Dec.	21.4	16.8	11.0	9.2	23.6	42.3	64.9	38.1	42.1
1928: June	14.5	5.7	5.7	3.8	3.9	13.2	2.3	4.1	15.6
Dec.	18.0	10.9	8.9	3.5	22.7	37.1	49.5	50.8	33.1
1929: June	10.4	4.1	5.1	2.2	3.3	11.8	1.6	6.2	10.2
Dec.	18.5	8.3	6.9	3.1	8.7	33.2	39.2	46.2	17.6
1930: June	11.9	5.3	6.2	4.0	7.9	14.2	4.2	10.6	15.3
Dec.	24.1	32.8	16.7	20.4	44.9	39.4	50.4	56.3	39.7
1931: June	21.1	12.9	13.4	14.8	38.1	20.8	5.9	12.1	20.9
Dec.	38.2	25.8	25.5	23.5	51.0	47.0	53.7	61.1	49.8
1932: March	39.6	23.5	26.0	25.7	36.6	47.6	47.9	50.0	41.3
June	39.6	22.6	23.3	24.8	39.7	33.2	20.5	21.3	21.7
Sept. ¹	38.9	26.0	23.6	23.5	41.7	31.3	38.1	9.2	24.1
Dec.	—	—	—	—	—	—	—	—	—
Membership of unions reporting (Sept. 1932)	4,735	19,704	76,704	5,641	5,506	19,953	6,218	6,514	5,880

¹ Provisional figures.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)Sweden (*continued*)Trade Union Returns (*continued*)

Date	F		G		H	I, J	
	Forestry, floating, sawmill, and wood-yard workers	Wood workers	Paper workers	Printers	Textile workers	Clothing workers	Shoe and leather workers
1927: June	19.0	13.0	4.2	4.3	3.4	6.9	6.4
Dec.	52.9	11.3	7.6	6.2	2.3	19.6	6.1
1928: June	16.5	9.6	3.6	2.7	2.9	4.0	6.6
Dec.	53.3	11.0	7.1	5.2	2.8	26.4	11.1
1929: June	14.0	7.7	3.6	2.3	4.5	4.1	7.8
Dec.	57.7	12.0	7.7	6.3	2.8	37.8	5.9
1930: June	21.4	6.5	5.1	2.4	3.4	2.3	4.2
Dec.	64.4	14.8	11.5	4.5	4.1	27.7	5.2
1931: June	23.1	14.0	9.7	3.3	4.1	4.3	6.6
Dec.	66.2	23.4	15.8	8.2	3.7	29.3	8.8
1932: March	47.1	28.2	15.2	8.9	5.1	14.3	12.1
June	34.5	29.3	10.3	7.7	7.1	8.0	12.9
Sept. ¹	43.8	22.4	17.7	10.5	6.8	10.4	10.6
Dec.	—	—	—	—	—	—	—
Membership of unions reporting (Sept. 1932)	25,903	12,322	26,466	9,412	26,109	13,994	9,464

Date	L			M, N	O, Q, R	S	All unions reporting ²
	Food workers	Tobacco workers	Brewery workers	Transport workers	Municipal workers	Workers employed in commerce	
1927: June	10.4	5.4	2.9	10.5	2.9	7.8	9.4
Dec.	19.6	7.7	5.2	12.8	8.5	7.5	13.6
1928: June	9.8	6.9	2.9	10.8	2.2	5.5	7.6
Dec.	20.0	5.9	5.5	13.7	8.4	7.4	17.3
1929: June	7.7	4.5	2.9	8.9	1.4	7.0	7.3
Dec.	20.1	1.2	4.9	11.8	7.6	7.4	16.9
1930: June	7.5	0.7	2.2	11.1	2.2	6.1	8.3
Dec.	20.3	0.5	5.0	16.1	8.3	8.3	23.3
1931: June	7.4	2.7	3.3	10.8	1.6	7.5	12.9
Dec.	19.8	2.2	6.3	11.4	9.3	10.0	27.1
1932: March	14.8	2.1	4.6	17.5	9.0	11.0	24.3
June	11.9	1.8	4.5	13.8	3.7	10.5	19.5
Sept. ¹	12.2	2.8	4.8	11.4	5.0	10.3	20.7
Dec.	—	—	—	—	—	—	—
Membership of unions reporting (Sept. 1932)	11,856	2,470	4,377	11,724	26,086	22,037	419,039

¹ Provisional figures.² Including unions of bookbinders, forestry and timber-floating workers, electricians, furriers, lithographers, other metal workers, etc.

TABLE II. — STATISTICS OF UNEMPLOYMENT, BY INDUSTRIES (*continued*)

Switzerland

Voluntary and Compulsory Unemployment Insurance Statistics: Number of Persons Insured and Percentages of Wholly (Wh.) and Partially (Ptl.) Unemployed

Date	C				E, F		G	
	Metal workers		Watch, etc., makers		Building and wood workers		Printing, etc., workers	
	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.
1927: June	1.0 ¹	1.9 ¹	—	—	1.8	0.2	3.2	0.1
Dec.	2.4	0.9	1.1	3.4	15.8	1.1	3.5	0.1
1928: June	0.3	0.1	0.4	1.0	1.2	0.0	2.2	0.0
Dec.	1.7	0.2	1.0	3.3	14.4	0.2	2.4	0.0
1929: June	0.2	0.0	0.2	1.1	0.6	0.0	1.5	0.1
Dec.	2.0	0.7	2.5	18.4	13.0	0.2	2.4	0.0
1930: June	0.8	2.3	5.3	37.4	1.1	0.2	2.0	0.0
Dec.	4.6	12.0	11.5	54.6	15.9	1.8	2.5	0.3
1931: June	1.7	12.5	16.5	56.8	1.5	0.2	2.8	0.6
Dec.	8.1	22.1	22.5	55.5	22.9	2.7	4.4	0.7
1932: March	9.8	22.6	24.9	57.1	11.9	1.9	5.3	1.1
June	6.9	21.3	27.7	45.1	4.9	1.5	6.7	1.4
Sept.	8.1	22.7	28.3	43.6	6.7	1.8	9.9	1.0
Dec.	—	—	—	—	—	—	—	—
Number insured	—	—	—	—	—	—	—	—

Date	H		I, J		S		All trades ²	
	Textile workers		Clothing and leather workers		Commercial employes			
	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.	Wh.	Ptl.
1927: June	3.4	5.0	0.1	0.0	1.1	0.0	1.6	1.7
Dec.	4.1	3.9	0.2	0.2	1.1	0.0	4.5	1.7
1928: June	3.1	1.8	0.7	0.5	0.9	0.0	1.2	0.8
Dec.	4.6	3.1	0.5	1.4	0.9	0.0	4.0	1.4
1929: June	2.0	3.8	0.4	3.1	0.7	0.0	0.7	1.0
Dec.	3.5	9.8	0.8	0.3	0.7	0.0	4.2	3.3
1930: June	2.7	10.2	0.2	0.1	0.9	0.0	1.7	5.7
Dec.	5.5	13.6	0.4	4.6	2.2	0.1	6.6	10.4
1931: June	2.8	12.3	1.1	8.8	2.7	0.3	3.6	9.7
Dec.	8.4	21.4	2.4	28.8	3.5	0.6	10.1	14.9
1932: March	10.1	19.8	7.0	19.6	3.8	0.7	9.0	14.0
June	8.9	14.7	5.5	4.6	4.2	0.7	7.1	11.3
Sept.	7.6	16.1	4.5	1.8	4.6	0.7	7.8	10.8
Dec.	—	—	—	—	—	—	—	—
Number insured	—	—	—	—	—	—	488,309	

¹ Including watch, etc., makers.² Including other trades.

TABLE III. — STATISTICS OF EMPLOYMENT, BY INDUSTRIES

Canada

*Employers' Returns: Number of Persons Employed and Index Numbers of Employment
(1926 = 100)*

Date ¹	B	C			D	E	F	
	Mining	Iron and steel products	Electrical apparatus	Non-ferrous metal products	Clay, glass, and stone products	Construction and maintenance	Lumber and products (incl. furniture)	Logging
1927: Jan.	104.7	94.2	108.3	100.7	93.3	73.1	77.4	136.1
July	106.6	103.0	106.5	114.4	112.2	144.2	115.8	69.9
1928: Jan.	112.6	96.9	109.5	107.9	89.8	78.6	78.1	163.2
July	113.1	116.4	118.4	122.0	116.5	154.3	117.7	69.5
1929: Jan.	116.2	114.9	128.7	121.7	108.3	87.4	84.2	171.0
July	119.5	126.8	142.7	134.8	137.8	164.5	122.7	80.1
1930: Jan.	122.5	107.3	156.3	127.4	116.0	92.7	83.7	200.2
July	113.8	109.5	156.1	127.6	137.1	170.1	105.4	82.1
1931: Jan.	114.4	88.7	143.5	112.7	95.2	110.7	66.8	107.6
July	104.1	85.8	133.3	114.2	112.9	137.1	83.7	38.5
1932: Jan.	105.1	70.7	126.4	93.6	77.1	104.8	55.6	68.7
April	101.0	75.6	119.9	92.8	75.8	79.9	58.8	31.1
July	95.0	68.2	109.0	78.2	78.2	93.3	64.8	34.2
Oct.	—	—	—	—	—	—	—	—
Number employed (1 July 1932)	42,975	89,076	12,112	12,085	8,427	106,570	33,768	9,364

Date ¹	G		H, I		J	K	L	
	Pulp and paper	Printing and publishing	Thread yarn, and cloth	Garments and personal furnishings	Leather and products	Chemicals and allied products	Animal products (edible)	Plant products (edible)
1927: Jan.	95.6	103.3	100.9	93.2	102.9	95.0	91.9	92.0
July	111.5	104.5	109.3	99.1	100.8	103.6	121.4	100.4
1928: Jan.	102.3	107.9	108.8	93.9	102.6	102.8	102.1	87.7
July	117.2	110.0	107.0	99.7	97.6	113.6	121.6	101.3
1929: Jan.	100.1	114.6	106.9	93.0	85.8	110.2	109.8	98.1
July	110.5	116.1	104.1	103.5	92.8	118.7	122.3	112.3
1930: Jan.	105.0	118.7	96.8	95.5	88.1	119.9	103.3	100.0
July	107.3	115.9	97.2	100.3	86.0	116.5	119.9	114.5
1931: Jan.	87.0	114.6	99.0	88.3	73.8	113.8	95.5	95.5
July	87.4	110.3	97.6	94.6	89.4	115.9	112.6	106.8
1932: Jan.	76.1	107.7	97.4	81.4	78.7	110.6	95.1	94.7
April	74.4	105.6	109.2	93.5	90.6	112.7	92.7	93.2
July	73.7	104.0	103.6	89.1	86.5	109.9	114.7	100.5
Oct.	—	—	—	—	—	—	—	—
Number employed (1 July 1932)	52,833 ²		81,158 ³		17,543	8,094	20,515	28,501

¹ Beginning of month. ² Including paper products. ³ Including other textile and clothing trades.

TABLE III. — STATISTICS OF EMPLOYMENT, BY INDUSTRIES (*continued*)

Canada (*continued*)
Employers' Returns (continued)

Date ¹	M	N	O	P	S	T	V	All industries ³
	Steam railways	Shipping and stevedoring	Electric current	Telegraphs and telephones	Trade	Hotels and restaurants	Professional services	
1927: Jan.	102.0	85.6	97.6	99.6	109.9	93.0	96.0	95.9
July	105.3	117.7	111.5	106.0	106.0	116.1	107.4	109.7
1928: Jan.	103.2	72.7	107.8	102.0	120.4	99.0	107.8	100.7
July	110.0	98.0	120.8	108.7	115.3	133.5	119.2	117.7
1929: Jan.	103.5	83.4	114.1	112.6	128.5	114.9	113.6	109.1
July	113.1	126.0	137.0	123.6	127.7	154.8	126.6	124.7
1930: Jan.	99.9	81.5	123.8	128.2	133.6	123.3	115.0	111.2
July	104.1	108.2	133.1	119.7	129.5	150.8	128.9	118.9
1931: Jan.	95.2	73.3	124.7	110.6	132.9	122.2	121.6	101.7
July	91.8	96.1	127.7	104.8	124.0	133.7	125.8	103.8
1932: Jan.	82.5	68.0	118.4	98.1	125.7	107.7	128.2	91.6
April	77.6	67.5	115.6	93.9	114.3	107.7	127.9	87.5
July	77.7	90.4	117.4	93.1	115.4	118.2	130.7	88.7
Oct.	—	—	—	—	—	—	—	—
Number employed (1 July 1932)	61,321	15,724	14,368	24,150	83,108	22,370 ²		811,972

¹ Beginning of month. ² Including personal services (chiefly laundries). ³ Including mineral products, musical instruments, other textile products, fur and fur products, rubber products, non-edible plant products (tobacco, etc.), street railways and cartage, personal services, etc.

France

Returns of Labour Inspectors and Mining Engineers: Number of Persons Employed and Index Numbers of Employment
(Number Employed in Same Month of Preceding Year = 100)

Date ¹	B	C		D	E	F	G, J		H
	Mining, quarrying	Iron and steel	Metal working (ordinary metals)	Pottery etc.	Navy-building, building construction in stone	Wood	Rubber, paper, cardboard	Printing (books)	Textiles
1931: January	98.5	95.2 ²	—	94.9	98.7	89.5	94.0	99.5	96.0
April	97.5	93.5	91.0	92.9	100.8	87.0	92.5	98.0	95.1
July	89.9	91.0	89.9	91.6	100.2	88.3	92.4	99.7	93.3
October	81.2	88.0	87.0	88.4	95.8	86.7	90.2	98.7	90.5
1932: January	85.3	83.8	81.5	81.8	95.2	81.5	88.7	96.9	85.9
April	84.0	81.8	80.7	79.1	87.7	85.1	89.2	93.9	81.5
July	109.1	92.8	81.4	81.4	98.2	84.9	90.9	93.2	89.7
October	126.9	83.1	84.2	83.5	103.7	85.7	93.7	93.4	79.0
Number employed (October 1932)	467	147,243	488,795	92,417	93,469	34,972	85,993	47,083	438,271

¹ Beginning of month. ² Including metal working.

TABLE III. — STATISTICS OF EMPLOYMENT, BY INDUSTRIES (*continued*)

France (*continued*)

Returns of Labour Inspectors and Mining Engineers (continued)

Date ¹	I	J	K	L	M, N	S		All trades ²
	Clothing, etc.	Leather, skins	Che- micals	Food	Trans- port	Com- merce	Banking, insurance	
1931: January	92.9	95.8	97.7	100.8	105.1	96.9	—	95.8
April	92.5	92.4	88.1	99.9	98.0	97.0	99.0	94.1
July	91.1	91.3	85.6	100.0	94.6	97.9	98.2	92.8
October	91.5	90.4	87.2	97.4	91.1	96.9	98.1	90.5
1932: January	88.2	89.0	85.3	91.1	84.6	93.8	98.7	86.6
April	88.0	81.4	91.7	95.0	87.4	93.9	95.9	85.1
July	86.6	84.3	94.5	96.5	88.9	93.5	94.7	88.4
October	90.3	88.5	93.5	96.8	90.2	93.2	93.2	86.9
Number employed (October 1932)	77,517	54,413	109,418	89,035	7,688	129,319	105,298	2,313,078

¹ Beginning of month. ² Including the working of straw, feathers, and horsehair, of fine metals, and of precious stones, stone cutting, and loading and unloading.

Italy

*Employers' Returns: Number of Persons Employed and Index Numbers of Employment
(Sept. 1926 = 100)*

Date	C					D	G	II	
	Metal- lurgy	Engin- eering shops (special- ised)	Engin- eering shops (miscel- laneous)	Ship- building	Auto- mobiles	Cement	Paper	Silk spinning	Arti- ficial silk
1928: June	86.2	87.3	93.8	89.5	81.6	91.5	98.3	29.4	122.9
December	89.5	93.1	101.0	88.6	88.2	90.1	99.1	87.5	129.3
1929: June	91.9	94.7	100.1	86.7	95.2	104.9	101.6	26.3	121.4
December	88.6	95.5	99.4	84.1	85.6	96.1	100.0	86.2	139.4
1930: June	86.2	95.1	91.0	85.7	80.6	93.9	96.4	38.3	127.7
December	81.6	93.8	86.0	91.9	68.6	79.7	95.5	87.3	107.8
1931: June	74.4	92.4	77.9	91.7	66.1	75.2	90.3	21.8	101.2
December	72.2	84.9	74.7	78.0	61.4	68.3	90.6	59.0	90.6
1932: March	68.8	82.5	67.3	70.5	61.7	63.7	88.1	37.9	79.6
June	69.8	82.1	67.8	68.3	64.2	70.9	86.9	5.2	72.9
September	—	—	—	—	—	—	—	—	—
December	—	—	—	—	—	—	—	—	—
Number employed (June 1932)	45,245	49,861	49,590	19,161	18,564	8,899	21,155	5,264	19,375

TABLE III. — STATISTICS OF EMPLOYMENT, BY INDUSTRIES (*continued*)

United States (*continued*)

Employers' Returns (*continued*)

A. — *Manufacturing Industries (Federal Reserve Board)* (*continued*)
(Average 1923-1925 = 100)

Date	H	I		J		K	L		All manufacturing industries, ¹
	Textile fabrics	Wearing apparel (textile)	Boots and shoes	Leather	Rubber products	Chemicals and products	Food and products	Tobacco manufacture	
1929: December	92.6	95.7	93.4	89.4	90.8	111.9	98.7	87.4	96.9
1930: June	84.4	88.7	89.9	85.1	88.0	105.7	95.8	89.7	89.7
December	76.4	80.1	77.3	74.0	74.7	97.9	90.8	83.5	80.1
1931: June	78.7	78.3	85.5	77.4	75.7	89.6	88.7	80.4	76.0
December	73.4	69.2	77.2	67.6	71.3	81.9	86.3	70.4	69.4
1932: March	71.9	68.9	83.4	67.0	67.0	78.6	83.1	70.8	66.4
June	58.7	58.1	76.9	63.4	67.0	76.4	81.1	69.4	60.0
September	—	—	—	—	—	—	—	—	—
December	—	—	—	—	—	—	—	—	—

¹ Including certain other groups, i.e. paper box manufacture, printing (newspaper and periodicals), car building and repairing, musical instrument making.

B. — *Non-Manufacturing Industries (Department of Labour)*
(Monthly Average 1929 = 100)

Date	B			M	O	P	S		T
	Bituminous coal mining	Quarrying and non-metallic mining	Crude petroleum producing	Steam railroads ¹	Power, light, water	Telegraph, telephone	Wholesale trade	Retail trade	Hotels
1929: June	94.7	106.6	—	96.1	100.7	101.5	99.2	97.4	99.3
December	101.3	90.1	—	88.8	102.5	101.8	102.6	126.2	97.7
1930: June	88.4	90.3	90.2	86.5	104.6	99.8	96.5	93.9	98.0
December	92.5	70.2	77.4	74.9	103.2	91.6	92.0	115.1	93.5
1931: June	78.4	72.3	65.0	72.8	97.2	86.9	87.1	89.1	91.6
December	81.2	53.9	58.2	62.6	90.3	83.1	83.7	106.2	84.1
1932: March	75.2	46.0	51.4	60.5	85.5	81.7	79.8	81.4	84.0
June	60.5	49.5	54.2	57.8	83.2	79.9	77.0	79.4	78.0
September	62.4	52.4	56.2	55.0 ²	81.0	77.4	77.1	77.8	77.0
December	—	—	—	—	—	—	—	—	—
Number employed (Sept. 1932)	154,296	24,436	21,190	983,112 ²	217,549	274,220	70,609	333,978	138,610

¹ Monthly average 1926 = 100.

² August 1931.

APPENDIX II

CHANGES IN OUTPUT PER WORKER SINCE THE BEGINNING OF THE POST-WAR PERIOD

Increased productivity has been one of the dominant tendencies in the economic development of the twentieth century and in particular of the post-war period; and the several factors to which it is due may all be grouped under the general heading "Rationalisation"—the leitmotiv of industrial evolution during recent years.

Few of the methods which constitute rationalisation are new, at least in theory; the novelty lies in their systematic combined use on a large scale, in the rapidity of their introduction and, in some respects, in the methods by which they are applied.

A brief review of these different methods will best begin with that which dominates the others, for they depend on it for existence, namely, *industrial research*. During the war, and still more in the years which followed it, research on industrial problems acquired an importance which it had never before enjoyed¹. Its essential purposes are to increase output and improve the quality of the product by placing the latest progress in natural science² and the science of organisation in the service of industry and agriculture.

The science of organisation concerns both the scientific organisation of material conditions of manufacture and the use of the human factor, two problems whose connection one with another is very close.

MATERIAL CONDITIONS OF MANUFACTURE

One factor which has had a profound effect on material conditions of manufacture and made their recent development possible is the growth

¹ As, for instance, in the U.S.A. where the annual expenditure on industrial research was estimated in 1925 at \$200,000,000; of this sum \$70,000,000 were spent by the public authorities and \$100,000,000 by undertakings which carried out research on their own account. Eleven trusts, chiefly in the metal, machine and foodstuffs industries, spent the equivalent of at least 1 per cent. of their turnover on research. In the case of many undertakings the profits obtained as a result of this research have been estimated at between 100 and 300 per cent. of the expenses entailed by it. (Hooven: *The Vital Need of Greater Financial Support of Pure Science Research*, p. 2; Report No. 65; Washington, National Research Council, 1925. — NATIONAL INDUSTRIAL CONFERENCE BOARD: *Mergers in Industry. A Study of Certain Economic Aspects of Industrial Consolidation*, pp. 111-114; New York, 1929.)

² Even the most abstruse scientific study sometimes leads to industrially applicable discoveries, as may be seen in the case of wireless telephony. Chemistry may be taken as a shining example of a science which has contributed enormously to the development of industry by eliminating waste, discovering useful by-products, increasing output by the introduction of technical improvements, making it possible to choose between different production methods, etc.

at an increased rate of the use of *power*. The output as well as the size of power-generating machinery has risen ¹, and the economy in heat which it has been possible to obtain has still further increased the value of available sources of energy.

It may, as an instance, be pointed out that between 1907 and 1925 the number of horse-power used in industry and trades in Germany rose from 8,814,598 to 35,385,281, or 301.4 per cent. In the United States (manufactures only) the corresponding figures were: 1914, 22,289,000; 1918, 29,323,653; 1927, 38,825,681; these are increases of 31.7 per cent. between 1914 and 1918, and 32.4 per cent. between 1919 and 1927. The available power per worker increased in Germany from 0.9 h.p. in 1907 to 2.8 h.p. in 1925, and in the United States from 3.23 h.p. in 1914 to 3.26 h.p. in 1919 and 4.65 in 1927 ².

One of the most characteristic features of this development has been the increase in the production of *electric power* and in its relative importance in the total production of power. Electric power to the extent of 1,634,553 h.p. was used in industry and trades in Germany in 1907; the figure was 14,201,886 in 1925, an increase of 768.9 per cent., or 42.7 per cent. per year. Electric power expressed as a proportion of all mechanical power employed in industry was, in Germany, 18.54 per cent. in 1907 and 40.14 per cent. in 1925. The total production of electric power in the world increased from 186,595,000,000 kwh. in 1925 to 255,622,000,000 kwh. in 1928 (37 per cent.). According to calculations given in a study published for the World Power Conference in Berlin in 1930, the total mechanical power from all sources (coal, mineral oil or gas, water, etc.) consumed by the human race during a year amounts to some 1,700,000,000,000 kwh., or about 900 kwh. per person. As this last figure represents nearly ten times as much work as a strong man can do in a year, some idea is given of what the energy drawn from nature and harnessed to the proper machinery can contribute to productivity ³.

The increased productivity has been largely due to the fact that the use of power has brought in its train the introduction of *new or improved machinery* ⁴ and that the mechanisation of labour resulting from the systematic use of power-driven machinery has been carried a stage further by the development of *mechanical systems of internal transport*, together with the processes of automatic feeding of machine tools and automatic clearing of products. By the combined action of the various mechanisms of production and circulation, the factory comes to function as one huge machine.

The scientific organisation of the factory is closely connected with the proper use of the human factor, whose part in production is also very important.

¹ The first large turbo-generator built by the General Electric Company in 1900 had a capacity of 5,000 kw.; to-day single units of 50,000 kw. are common, and combined units of 100,000 kw. are not unusual. The new State Line Power House of the Chicago Edison Company will have a final capacity of 1,000,000 kw. (*Recent Economic Changes*, Vol. I, p. 91.)

² *Statistisches Jahrbuch für das Deutsche Reich*, p. 89; Berlin, 1930. — *Statistical Abstract of the United States*, 1929.

³ Cf. G. BRECHT: "Die neuere Entwicklung der Energiewirtschaft", in "Die Weltkraftkonferenz", Supplement to *Der deutsche Volkswirt*, No. 37, 13 June 1930, pp. vii-viii.

⁴ Cf., on this subject, data given in Chapter I, p. 16.

THE HUMAN FACTOR

At the head of his whole system Taylor placed the scientific analysis of the worker's task. The determination of standard movements and standard times for each task is naturally accompanied by the selection¹ and training² of workers with an aptitude for it.

Instead of analysing individual tasks, experts now analyse the complete labour process, and the result has been not only fresh progress in the division of labour but also a closer connection between the tasks of different workers, a connection which may even go as far as the integration of the movements of two or more men or groups. *Chain work* thus made its appearance as a feature of industrial technique: and although it is no innovation of to-day, in recent years its use has attained dimensions which were previously unknown.

From the technical point of view, the chief factors in the increase of output in this system were discovered to be economies in handling and in manufacturing time, due to the suppression of idle periods and to the progressive training of the workers. Further advantages from the financial and administrative points of view are economy in circulating capital, economy in fixed capital due to a reduction in the waste space in workplaces, and simplification in the supervision of production and in accountancy. The efficiency of the system is amply proved by various experiments³.

By means of the technical progress mentioned, it has been possible to combine the integration of the movements of various workers with an integration of their movements and those of mechanical devices—many different kinds of "conveyers"—which automatically supply each man with the material for his own work after this material has been handled, transformed and added to by the men who precede him in the chain. The innovation of to-day is the addition of this mechanical

¹ Thanks to scientifically organised selection, output has been increased by from 10 to 40 per cent. in the World Book Company, Oakland Motors, the Western Electric Company, the Siemens-Schuckert Works and numerous other English, French and Belgian undertakings. (P. SOLLIER and J. DRABS: *Le choix scientifique des travailleurs*, p. 22; Rome, 1927.)

² In Switzerland, Professor Suter has studied the training of workers in the Bally shoe factory at Schönenwerd. As a result of his experiments, he asserts that by a systematic training of workers one may be certain, first of all, of reducing the apprenticeship period considerably, and, secondly, of doubling or even trebling output. (Quoted by Dr. Ing. A. CARRARD: "Zur Psychologie des Anlernens und Einübens im Wirtschaftsleben," in *Schweizer Schriften für rationelles Wirtschaften*, No. 1, p. 28; Zurich 1927.) The growth in the use of incentive systems of remuneration may also be cited among the innovations tending to influence the human factor in the direction of increased output.

³ In France, for instance, in the rolling stock shops of the Eastern Railway Company, the time required for the testing of bogies has been reduced by 42.1 per cent. in the Noisy-le-Sec shops this means a saving of 19,000 hours per year. The costs entailed by the adoption of this method were very soon paid off. (*Revue générale des chemins de fer*, April 1930, pp. 351-352, and June 1930, pp. 549-553.) On the German railways the time required for the fitting of the Knorr brake has been reduced, thanks to the chain system, from 154 to 46 hours (70 per cent.). In the Brandenburg locomotive repair shops a piece of work which formerly required from 3 to 5 months is now done by the chain system in 15 days—a saving of 87.5 per cent. (P. SETZERMANN: "Fliessarbeit als Hauptproblem der Rationalisierung," in *Maschinenmarkt*, 2 Aug. 1927, Pössneck.)

chain to the human chain which already existed; and the result is a further mechanisation of the labour process and a profound transformation of its technique.

Chain work is thus an instance of the interdependence of the various factors to which increased productivity is due. Many such instances may be quoted; to take one, chain work, if not a *sine qua non* of another characteristic feature of modern industry, standardised mass production, is closely bound up with it.

Standardisation is met with at every stage of scientific management in the form of systematisation, rhythm or established routine applied to labour so as to increase its speed and efficiency, or to equipment, materials, methods, products, etc. It gives an impulse to the progress of mechanisation and mass production, leads to large economies by reducing waste and producing standard types, and stimulates industrial research, which is further encouraged by increased concentration, since the relative amount spent on research mounts with the turnover of the undertaking concerned.

These, then, are the principal changes in the technical conditions of industry, which, introduced at different periods and at different speeds, have led to a general increase in productivity, with variations according to industry, country, and year as the following tables show.

For the countries with which the tables deal—Australia, Canada, Germany, Great Britain, New Zealand, Sweden, United States of America—it has been possible to collect or calculate general data which enable the changes in productivity to be followed.

These data refer sometimes to annual production per employed person or worker, and sometimes to production per hour worked. The disadvantage of data of the former type is that they reflect, for a given period, not only the variations in productivity proper but also the variations in productivity which result from changes in the volume of employment. However, the period covered (1923-1929) was on the whole one of comparatively stable employment, and the objection therefore loses force in these particular cases.

For some countries the figures refer to the volume of physical production; for others they refer to the value of production, corrected, with the aid of wholesale price indexes, by the elimination of the changes due to annual fluctuations in price.

In the case of Australia, Canada and New Zealand the figures refer to the value added by manufacture, i.e. they show the value of the finished products less that of the raw materials used.

In the calculation of the index numbers, 1923 is taken in general as the base year; but in view of the economic and financial disturbances which were then occurring in Germany, the year taken for that country is 1925.

Australia

Value of Manufacturing Production¹, Number of Persons Employed and Value (Corrected by Wholesale Prices) per Person Employed

Absolute Figures and Index Numbers (Base: 1922-1923 = 100)

Year	Number of persons employed		Value of gross output	Value added by manu- facture	General whole- sale prices	Value added by manufacture corrected by wholesale prices			
						Total		Per person employed	
	Absolute figures	Index num- bers	Thousands of £	Index num- bers	Thou- sands of £	Index num- bers	£	Index num- bers	
1922-1923	395,460	100.0	326,497	131,755	100.0	131,755	100.0	333	100.0
1923-1924	414,223	104.7	348,578	141,242	105.1	134,388	102.0	324	97.3
1924-1925	428,054	108.2	380,844	147,137	99.6	147,728	112.1	345	103.6
1925-1926	436,297	110.3	400,342	155,424	101.5	153,127	116.2	351	105.4
1926-1927	452,184	114.3	408,693	162,325	95.4	170,152	129.1	376	112.9
1927-1928	449,728	113.7	416,994	167,403	100.4	166,736	126.6	371	111.4
1928-1929	450,482	113.9	420,445	167,623	95.6	175,338	133.1	389	116.8
1929-1930	419,194	106.0	390,912	156,364	94.1	166,168	126.1	396	118.9

¹ Industrial groups: treating raw materials, products of agricultural and pastoral pursuits, etc.; treating oils and fats, etc.; processes in stone, clay, glass, etc.; working in wood; metal works, machinery, etc.; connected with food and drink, etc.; clothing and textile fabrics, etc.; books, paper, printing, and engraving; musical instruments, etc.; arms and explosives; motor and other road vehicles and accessories; ship and boat building and repairing; furniture, bedding, and upholstery; drugs, chemicals, and by-products; surgical and other scientific instruments; jewellery, timepieces, and plated ware; heat, light, and power; leatherware, n.e.i.; other industries, n.e.i.

SOURCE. — COMMONWEALTH BUREAU OF CENSUS AND STATISTICS: *Production, Summary of Australian Production Statistics, 1918-1919 to 1928-1929 and 1919-1920 to 1929-1930*. Bulletins Nos. 23-24. Canberra.

Canada

Value of Manufacturing Production¹, Number of Persons Employed and Value (Corrected by Wholesale Prices) per Person Employed and per Worker

Absolute Figures and Index Numbers (Base: 1923 = 100)

Year	Number of persons employed				Value of gross output	Value added by manufacture
	Total		Workers			
	Absolute figures	Index numbers	Absolute figures	Index numbers	Thousands of \$	
1922	474,430	90.3	398,390	89.1	2,482,209	1,198,434
1923	525,267	100.0	446,994	100.0	2,781,165	1,311,025
1924	508,503	96.8	432,273	96.7	2,695,054	1,256,644
1925	544,225	103.6	466,602	104.4	2,948,545	1,360,880
1926	581,539	110.7	499,745	111.8	3,247,803	1,492,645
1927	618,933	117.8	533,450	119.3	3,425,499	1,635,924
1928	658,023	125.3	566,780	126.8	3,769,850	1,819,046
1929	694,434	132.2	597,827	133.7	4,063,987	1,997,350

Year	General wholesale prices	Value added by manufacture corrected by wholesale prices					
		Total		Per person employed		Per worker	
	Index numbers	Thousands of \$	Index numbers	\$	Index numbers	\$	Index numbers
1922	99.3	1,206,882	92.1	2,544	101.9	3,029	103.3
1923	100.0	1,311,025	100.0	2,496	100.0	2,933	100.0
1924	101.4	1,239,294	94.5	2,437	97.6	2,867	97.7
1925	104.8	1,298,550	99.0	2,386	95.6	2,783	94.9
1926	102.1	1,461,944	111.5	2,514	100.8	2,925	99.7
1927	99.7	1,640,847	125.2	2,651	106.2	3,076	104.9
1928	98.4	1,848,624	141.0	2,809	112.5	3,262	111.2
1929	97.6	2,046,466	156.1	2,947	118.1	3,423	116.7

¹ Industrial groups: vegetable products; animal products; textile products; wood and paper; iron and its products; non-ferrous metals; non-metallic minerals; chemical and allied products; central electric stations; miscellaneous industries.

SOURCE. — *The Canada Yearbook, 1932*, p. 319. Ottawa, 1932.

I. — *Production, Number of Persons Employed and Output per Person Employed*
 Absolute Figures and Index Numbers (Base: 1925 = 100)

Year	Coal						Lignite					
	Number of workers			Production			Number of workers			Production		
	Absolute figures	Index numbers	Total	Quantity	Index numbers	Output per person employed	Absolute figures	Index numbers	Total	Quantity	Index numbers	Output per person employed
				Thousands of tons		Tons				Thousands of tons		Tons
1924	558,938	100.3		118,769	89.6	212	83,713	114.3		124,637	89.2	1,330
1925	557,087	100.0		132,622	100.0	238	82,023	100.0		139,725	100.0	1,703
1926	514,807	92.4		145,296	109.6	282	76,688	93.5		159,151	99.6	1,815
1927	542,062	97.3		153,599	115.8	283	72,324	88.2		150,504	107.7	2,081
1928	547,642	92.9		150,861	113.8	291	72,589	88.5		165,588	118.5	2,281
1929	517,401	92.9		163,441	123.2	316	73,952	90.2		174,456	124.9	2,359
				Iron ore			Sulphur ore					
				Thousands of tons		Tons				Thousands of tons		Tons
1924	17,606	98.4		4,457	75.2	253	753	103.1		158,623	71.0	212
1925	17,887	100.0		5,923	100.0	331	728	100.0		223,293	100.0	307
1926	14,195	79.4		4,793	80.9	338	798	109.6		237,870	106.5	298
1927	17,770	99.4		6,626	111.9	373	891	122.4		350,430	156.9	393
1928	16,901	94.5		6,475	109.3	333	991	136.1		342,179	153.2	345
1929	16,235	90.8		6,374	107.6	333	997	137.0		351,909	157.6	352
				Lead, zinc and silver ore			Copper ore					
				Tons		Tons				Tons		Tons
1924	10,549	99.3		1,241,173	90.9	118	13,132	126.5		791,602	97.6	60
1925	10,628	100.0		1,365,819	100.0	129	10,385	100.0		810,729	100.0	78
1926	11,785	110.9		1,695,792	124.2	144	10,382	100.0		932,332	115.0	90
1927	16,146	151.9		1,840,626	134.8	114	9,504	91.5		950,396	117.2	100
1928	10,235	96.3		1,882,912	137.9	181	8,759	84.3		908,906	112.1	104
1929	9,281	87.3		1,873,098	137.1	201	9,106	87.7		1,025,455	126.5	113
				Tin, cobalt, nickel, antimony and bismuth ore			Rock salt and potash					
				Tons		Tons				Thousands of tons		Tons
1924	262	139.4		21,517	126.5	82	28,651	94.1		9,697	70.0	338
1925	188	100.0		17,013	100.0	90	30,449	100.0		13,846	100.0	455
1926	188	100.0		20,558	120.8	109	26,546	87.2		11,374	82.1	428
1927	168	89.4		20,287	119.2	121	23,780	78.1		13,341	96.4	561
1928	145	77.1		14,718	86.5	102	24,365	80.0		14,889	107.5	612
1929	165	87.8		22,384	131.6	136	25,174	82.7		15,857	114.5	630

Source: — Supplement to *Wirtschaft und Statistik*, No. 8: "Industrielle Produktion. Sammlung produktionsstatistischer Ergebnisse bis zum Jahre 1930," Berlin, 1931, — *Statistisches Jahrbuch für das Deutsche Reich*, 1931.

Germany (continued)

I. — Production, Number of Persons Employed and Output per Person Employed (continued)

Absolute Figures and Index Numbers (Base: 1925 = 100)

Year	Naphtha						Graphite						
	Number of workers			Production			Number of workers			Production			
				Total						Total			
	Absolute figures	Index numbers		Quantity	Index numbers	Output per person employed	Absolute figures	Index numbers		Quantity	Index numbers	Output per person employed	
1924	1,746	106.6		Tons	75.0	34	465	113.1		Tons	59.8	22	53.7
1925	1,638	100.0		59,352	100.0	48	411	100.0		16,079	100.0	41	100.0
1926	1,699	103.7		79,130	120.6	56	331	80.5		16,853	84.9	43	101.9
1927	1,839	112.3		95,392	122.4	53	291	70.8		14,304	105.5	61	148.8
1928	1,590	97.1		96,877	116.3	58	279	67.9		17,773	103.6	63	153.7
1929	1,756	107.2		92,045	130.0	59	353	85.9		17,463	126.7	60	145.3
				102,867						21,349			

Germany (continued)

II. — Index Numbers of the Value, Corrected by Wholesale Prices, of Gross Output per Hour Worked and per Industrial Group

(Base: 1926 = 100)

Year	Mining	Foundries	Iron and steel	Mechanical engineering	Electrical engineering	Stone	Chemicals	Textiles
1927	104.3	111.6	113.7	102.4	98.5	105.4	102.2	107.3
1928	111.5	110.1	121.2	117.3	102.7	107.2	107.5	98.5
1929	119.1	114.7	124.1	124.6	106.2	109.0	112.7	100.6
1930-1931	117.9	114.0	125.0	125.0	106.0	110.0	113.0	108.8

Year	Paper	Leather	Rubber	Wood carving	Musical instruments and toys	Food	Clothing	Building
1927	101.9	101.3	111.2	109.0	112.2	101.9	104.2	101.1
1928	105.8	92.3	133.3	115.1	118.1	104.5	108.5	108.6
1929	109.3	96.4	155.3	116.3	125.3	107.0	113.4	114.5
1930-1931	110.0	103.9	160.0	116.0	125.0	110.0	110.0	115.0

SOURCE. — INSTITUT FÜR KONJUNKTURFORSCHUNG: *Vierteljahrshefte zur Konjunkturforschung*, Supplement No. 29: "Stand und Ursachen der Arbeitslosigkeit in Deutschland". Berlin, 1932.

Great Britain

I. — Productivity Changes since 1924 (Manufacture, Mining and General)

Year	Persons employed (thousands)		Index of employment		Output index			Output per head		
	Manufacture	Mining	Manufacture	Mining	Manufacture	Mining	General	Manufacture	Mining	General
1924	5,220	1,093	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	5,470	840	104.8	76.9	109.3	95.0	106.8	104.3	123.8	106.8
1928	5,463	771	104.7	70.5	109.4	89.2	105.5	104.5	126.4	106.8
1929	5,547	829	106.3	75.8	115.1	96.8	111.8	108.2	126.3	110.7
1930										
(1st quarter)	5,316	861	101.8	78.8	113.2	102.0	110.9	111.2	131.3	113.2
1930										
(2nd quarter)	5,145	758	98.6	69.3	107.5	87.4	103.4	109.3	126.1	110.4

SOURCE. — COMMITTEE ON FINANCE AND INDUSTRY: *Report*. London, 1931. Cmd. 3897. (Sources utilised by the Report: Production, Board of Trade Index; Employment, estimated by method given in *Journal of the Royal Statistical Society*, 1929, Part I.)

Great Britain (continued)

II. — Production, Employment, Output per Head in Main Industrial Groups, 1924-1929

(Index Numbers: 1924 = 100)

Year	Volume of employment (thousands)						Index of employment ¹									
	Coal mining	Iron and steel	Engineering and ship-building (incl. motors and electrical trades)	Textiles	Food, drink and tobacco	Leather and boots	Chemical and allied trades	All industry	Coal mining	Iron and steel	Engineering and ship-building (incl. motors and electrical trades)	Textiles	Food, drink and tobacco	Leather and boots	Chemical and allied trades	All industry
1924	1,093	245.0	1,158	1,088	476.6	179.1	183.8	6,324	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	1,840	235.8	1,118	1,155	497.5	180.8	192.7	6,338	76.9	96.2	96.5	106.2	104.4	100.9	104.8	100.2
1928	771	227.5	1,206	1,138	496.3	165.6	202.9	6,242	70.5	92.9	104.1	104.6	104.1	92.5	110.4	98.7
1929	829	231.5	1,243	1,130	498.3	165.0	205.3	6,359	75.9	94.5	107.3	103.9	104.6	92.1	111.7	100.6
<hr/>																
Physical volume of output																
1924 = 100																
1927	94.0	110.0	115.2	101.6	99.7	107.7	105.2	106.8	122.4	114.3	112.2	94.7	95.5	106.7	100.4	106.6
1928	89.0	102.3	113.1	99.9	101.9	102.0	110.3	105.5	126.2	110.2	115.7	95.5	97.8	110.4	99.9	106.9
1929	96.4	114.0	120.9	98.5	106.0	98.5	112.5	111.6	127.1	120.6	115.6	94.8	101.4	106.9	100.8	111.1

¹ Calculated by the International Labour Office.

SOURCE. — COMMITTEE ON FINANCE AND INDUSTRY: *Report*. London, 1931. Cmd. 3897. (Sources utilised by the Report: Production, Board of Trade Index; Employment, calculated from annual figures published by the Ministry of Labour; Output, per head from above two.)

New Zealand

Value of Manufacturing Production¹, Number of Persons Employed and Value (Corrected by Wholesale Prices) per Person Employed and per Worker

Absolute Figures and Index Numbers (Base: 1925-1926 = 100)

Year	Number of persons employed				Value of gross output	Value added by manufacture
	Total		Workers			
	Absolute figures	Index numbers	Absolute figures	Index numbers	Thousands of £	
1925-1926 ²	82,018	100.0	67,532	100.0	85,043	32,569
1926-1927	81,904	99.9	67,075	99.3	83,013	32,799
1927-1928	81,756	99.7	66,767	98.9	87,732	32,424
1928-1929	83,680	102.8	68,847	101.9	93,172	33,302
1929-1930	85,797	104.6	70,151	103.9	93,465	34,256

Year	General whole-sale prices	Value added by manufacture corrected by wholesale prices					
		Total		Per person employed		Per worker	
	Index numbers	Thousands of £	Index numbers	£	Index numbers	£	Index numbers
1925-1926 ²	100.0	85,043	100.0	1,037	100.0	1,259	100.0
1926-1927	95.1	87,290	102.6	1,066	102.8	1,301	103.3
1927-1928	91.2	96,197	113.1	1,177	113.5	1,441	114.4
1928-1929	92.1	101,164	119.0	1,209	116.6	1,469	116.7
1929-1930	91.7	101,925	119.9	1,188	114.6	1,453	115.4

¹ Industrial groups: animal food; vegetable food; drinks, narcotics and stimulants; animal matters (not otherwise classified); working in wood; vegetable produce for fodder; paper manufactures; heat, light and power; processes relating to stone, clay, glass, etc.; metals other than gold or silver; precious metals; books and publications; musical instruments; ornaments and minor art products; equipment for sports and games; designs, medals, type and dies; machines, tools and implements; carriages and vehicles; harness saddlery and leatherware; ships, boats and their equipment; house-furnishings; chemicals and by-products; textile fabrics; apparel; fibrous materials; miscellaneous.

² The first year for which comparable figures are available.

SOURCE. — New Zealand Official Yearbook. Wellington.

Sweden

I. — *Index Numbers of Industrial Production¹, Number of Workers and Output per Worker for Years 1920-1929*

(Base: 1923 = 100)

Year	Number of workers	Physical production	Output per worker ²
1920	116.7	100.0	85.7
1921	91.7	77.4	84.4
1922	90.6	91.4	100.9
1923	100.0	100.0	100.0
1924	105.2	114.0	108.4
1925	109.4	117.2	107.1
1926	113.5	128.0	112.9
1927	114.6	132.3	115.4
1928	121.9	139.8	114.7
1929	126.0	158.1	125.5

¹ Industrial groups: mining; iron and steel; engineering; quarrying and allied industries; timber; paper; printing; food; textiles and clothing; hides, skins and rubber; chemicals.

² Calculated by the International Labour Office.

SOURCE. — SOCIALDEPARTEMENT: *Arbetslöshetsutredningen, Arbetslöshetens Omfattning, Karaktär och Orsaker*, pp. 139 and 190. Stockholm, 1931. — Index numbers, calculated on the base of 1915=100, have been converted by taking as a base 1923 = 100.

Sweden (continued)

II. — Index Numbers of Physical Production per Hour Worked for Years 1920-1929

(Base: 1923 = 100)

Year	Mining	Iron and steel, etc.	Engineering	Quarrying and allied industries	Timber	Paper
1920	60.3	79.8	82.2	81.0	86.8	77.6
1921	101.9	75.4	88.9	88.1	87.6	74.6
1922	99.4	91.2	102.2	95.2	98.4	95.5
1923	100.0	100.0	100.0	100.0	100.0	100.0
1924	107.1	101.8	100.0	91.3	100.0	103.4
1925	116.7	104.4	101.5	93.7	99.2	108.2
1926	121.8	110.5	106.7	103.2	102.3	111.2
1927	127.6	112.3	108.9	100.0	105.4	114.9
1928	109.0	116.7	117.0	102.4	107.0	117.2
1929	132.1	126.3	120.8	106.4	108.5	127.6

Year	Printing	Food	Textiles and clothing	Hides, skins and rubber	Chemicals	Total for all industries
1920	82.6	85.2	91.7	88.4	68.3	82.9
1921	84.4	93.0	90.8	91.1	81.7	92.7
1922	91.7	96.5	97.2	97.3	95.7	100.8
1923	100.0	100.0	100.0	100.0	100.0	100.0
1924	95.4	100.9	100.0	98.2	104.3	101.6
1925	98.2	102.6	98.2	92.0	112.2	102.4
1926	102.8	110.4	99.1	92.0	117.7	107.3
1927	105.5	111.3	100.9	98.2	122.0	108.1
1928	107.3	112.2	100.9	98.2	129.9	110.6
1929	111.9	120.9	102.8	98.2	130.5	116.3

SOURCE. — SOCIALDEPARTEMENTET: *Arbetsföretagets utredningen, Arbetslöshetens Omfattning, Karaktär och Orsaker*, p. 195. Stockholm, 1931. Index numbers, calculated on the base: 1915 = 100, have been converted by taking as a base 1923 = 100.

United States

I. — General Indexes of Production and Workers, 1927 in relation to 1919

Industry	Workers (thousands) ¹		Index, 1927 (1919 = 100)			Value of output 1919 used for weighting (millions of dollars)
	1919	1927	Number of workers	Quantitative output	Output per worker	
Agriculture	11,300	10,400	92	119	129 ½	15,700
Mining	1,050	1,050	100	140	140 ½	3,175
Manufactures	10,686	9,868	92	130 ½	142 ½	24,748
Transportation (railway)	1,913	1,737	91	102 ½	112 ½	5,145
Total or average	24,949	23,055	92 ½	124 ½ ²	135	48,768

¹ Figures in part are estimates.

² Weighted by value in 1919. Weighting, in this instance, by number of workers in 1919 gives practically the same figure (123 ½).

SOURCE. — U.S. DEPARTMENT OF COMMERCE: *Commerce Yearbook*, 1929, Vol. I, p. 34.

United States (continued)
Index Numbers of Man-Hour Productivity of Labour in Eleven Manufacturing Industries, for Specified Years, 1899 to 1927
 (Base: 1914 = 100)

Year	Iron and steel			Boots and shoes	Leather tanning	Slaughtering and meat packing	Petroleum refining	Paper and pulp	Cement manufacturing	Automobiles	Rubber tires	Flour milling	Cane-sugar refining
	Industry as a whole	Blast furnaces	Steel works and rolling mills										
1899	59	44	63	100	93	—	61	—	—	—	—	—	—
1904	69	59	70	108	92	—	57	83	—	40	—	94	—
1909	100	80	104	100	92	115	117	95	—	35	—	92	—
1914	100	100	100	100	100	100	100	100	100	100	100	100	100
1919	100	85	96	108	102	98	97	105	101	141	149	95	73
1921	87	106	85	111	130	113	114	95	123	190	198	118	83
1923	131	149	126	119	138	120	138	117	132	265	279	127	104
1924	130	156	123	115	135	125	165	121	132	258	338	139	117
1925	153	196	143	115	134	121	179	127	138	280	352	143	133
1926	157	204	149	115	134	127	169	136	144	302	366	154	140
1927	155	203	146	124	141	126	182	140	154	278	392	159	133
Calculated on the Base 1919 = 100													
1919	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1921	87	124.7	88.5	102.8	127.5	115.3	117.5	90.5	121.8	134.8	132.9	124.2	106.4
1923	131	175.3	131.2	110.2	135.3	122.4	142.3	111.4	130.7	187.9	187.2	133.7	133.3
1924	130	183.5	128.1	106.5	132.4	127.6	170.1	115.2	130.7	183.0	236.8	146.3	150.0
1925	153	230.6	148.9	106.5	131.4	123.5	184.5	121.0	136.6	198.6	236.2	150.5	170.5
1926	157	240.0	155.2	106.5	131.4	129.6	174.2	129.5	142.6	214.2	245.6	162.1	179.5
1927	155	238.8	152.1	114.8	138.2	128.6	187.6	133.3	152.5	197.2	263.1	167.4	170.5

Source. — U.S. Monthly Labour Review, March 1930, p. 2.

APPENDIX III

SHORT TIME AND OVERTIME

This Appendix gives the statistical data as to short time, overtime, and re-employment referred to in Chapter II.

1. DENMARK

I. — *Short Time among Trade Union Members in Denmark (20 July 1932)*

Union	Membership in 1932	Percentage unemployed	Percentage of those employed working short time
Moulders	1,983	51.5	34.8
Pottery workers	1,309	34.7	26.7
Textile workers	10,584	16.1	22.8
Chocolate and sweet factory workers	1,438	24.4	22.2
Women Workers' Union	12,518	21.3	20.4
Gold, silver and electroplate workers	1,246	44.7	14.9
Boot and shoe makers	4,084	30.8	14.2
Tailors	9,909	21.4	13.2
Woodworkers	4,208	33.5	12.5
Bookbinders	3,590	26.2	11.8
Saddlers and upholsterers	1,896	41.3	5.7
Tobacco workers	7,942	33.5	5.2
Joiners and cabinet makers	8,664	47.9	5.1
General Workers' Union	104,577	30.1	4.7
Ironworkers and engineers	28,841	37.0	4.4
Bakers and confectioners	4,401	25.8	3.4
Hatters	1,384	24.4	0.7
Other trades	105,761	— ¹	0.7 ²
Total	314,335	28.7	5.7

¹ Figure not given.

² Percentage of total membership working short time.

II. — *Distribution of Various Forms of Short Time (20 July 1932)*

Method of working short time	Number of hours per day or days per week worked less than normal	Number of workers affected	Percentage of workers on short time affected
Reduction of working week by reduction of number of hours worked in the day	Hours $\frac{1}{2}$	55	0.4
	1	1,819	14.2
	$1\frac{1}{2}$	86	0.7
	2	1,472	11.5
	$2\frac{1}{2}$	86	0.7
	3	658	5.2
	4	714	5.6
	More than 4	23	0.2
	Total	4,913	38.5
Reduction of working week by reduction of number of days worked in the week	Days $\frac{1}{2}$	78	0.6
	1	1,786	14.0
	$1\frac{1}{2}$	159	1.2
	2	1,715	13.4
	$2\frac{1}{2}$	9	0.1
	3	2,672	20.9
	4	827	6.5
	More than 4	327	2.6
	Total	7,573	59.3
Reduction of hours worked by means of reduction both in the hours per day and days per week	—	280	2.2
Total	—	12,766	100.0

SOURCE. — *Statistiske Efterretninger*, published by the Statistical Department, 24 Sept. 1932.

2. ESTONIA

Distribution of Workers by Number of Hours Actually Worked (June 1932)

Industries	Number of workers observed	Hours per month							Total
		Over 200	195-200	175-194	150-175	125-149	100-124	Under 100	
Extractive	3,685	1.8	76.6	29.8	0.8	—	—	—	100
Mineral	1,119	52.2	26.7	18.2	2.9	—	—	—	100
Metal	3,064	2.5	33.8	59.8	—	3.9	—	—	100
Chemical	795	41.6	49.1	—	—	9.3	—	—	100
Hides and skins	172	—	88.4	11.6	—	—	—	—	100
Textile	6,908	0.3	15.0	47.4	28.1	9.2	—	—	100
Wood	2,580	8.8	30.0	59.6	1.6	—	—	—	100
Paper	1,501	5.2	6.7	58.1	28.4	1.6	—	—	100
Printing	970	7.1	75.5	13.8	3.0	—	0.3	0.3	100
Food and drink, etc.	1,911	1.1	57.9	16.0	5.7	9.8	9.5	—	100
Clothing and haberdashery	1,476	6.2	56.3	28.3	2.3	2.8	—	4.1	100
	24,181	6.5	38.3	38.7	10.9	4.5	0.8	0.3	100

SOURCE. — *Eesti Statistika Kuukiri*, Oct. 1932.

3. FRANCE

Weekly Hours of Work (1 October 1932)

Occupational groups	Number of undertakings	Number of workers at the beginning of October 1932	Hours per week					
			48 and over	Over 40 and under 48	40	Over 32 and under 40	32	Under 32
Extractive	9	467	100.00	—	—	—	—	—
Food and drink	437	89,035	80.86	13.62	3.88	1.07	—	0.57
Chemical	457	109,418	74.64	14.41	7.68	1.94	0.15	1.18
Rubber, paper, cardboard	362	85,993	63.80	14.08	14.43	3.71	2.75	1.23
Printing	252	47,083	80.21	12.13	5.27	1.41	0.52	0.46
Textile	2,117	438,271	40.74	21.88	12.61	12.96	5.48	6.33
Cloth and clothing	480	77,517	80.84	9.84	4.54	4.07	0.51	0.20
Straw, feathers, hair	17	774	58.79	17.05	—	—	17.31	6.85
Hides and skins	376	54,413	53.54	19.04	8.04	11.18	1.73	6.47
Wood	361	34,972	63.49	19.47	8.80	4.50	2.43	1.31
Metallurgy	198	147,243	38.14	25.66	16.76	8.20	8.27	2.97
Metal goods and engineering	1,724	488,795	45.33	25.83	12.04	10.62	3.12	3.06
Fine metals	45	4,152	29.11	47.10	10.24	3.78	2.50	7.27
Precious stones	8	420	79.04	20.96	—	—	—	—
Stone cutting and grinding	22	2,351	65.38	8.46	22.08	3.02	—	1.06
Building and navvying	451	93,469	97.05	2.11	0.71	0.13	—	—
Stones and clay-baking	515	92,417	50.07	19.18	8.64	6.62	7.84	7.65
Handling of goods	41	6,100	100.00	—	—	—	—	—
Transport	39	7,688	93.77	0.38	5.85	—	—	—
Various commercial undertakings	454	129,319	96.78	2.74	0.39	—	—	0.09
Banks, insurance	247	105,298	99.07	0.90	—	0.03	—	—
Total	8,612	2,015,195	59.56	17.72	9.29	7.19	3.17	3.07
Mining areas	279	297,883	11.92	19.80	7.86	53.27	6.75	0.40
Grand Total	8,891	2,313,078	53.43	17.98	9.11	13.12	3.63	2.73

SOURCE. — *Bulletin du marché du travail*, published by the Ministry of Labour and Social Welfare, 28 October 1932: "Enquête sur les effectifs et les heures de travail dans les établissements soumis au contrôle des inspecteurs du travail et des ingénieurs des mines."

4. GERMANY (TRADE UNION MEMBERS)

I. — Unemployment among Trade Union Members (24 September 1932)

		Per-centage
Members unemployed.	1,495,129	43.6
Members in employment.	1,937,391	56.4
On full time	1,157,274	33.7
On short time	780,117	22.7
Total membership covered by returns.	3,432,520	100.0

SOURCE. — *Reichsarbeitsblatt* (Statistical Supplement), 5 Nov. 1932.

II. — Number and Proportion of Trade Union Members Working Short Time to Various Extents (24 September 1932)

Extent of short time Hours per week	Numbers	Percentage of those employed
1-8	336,866	17.4
9-16	191,155	9.9
17-24	181,506	9.4
25 and over	70,590	3.6
Total	780,117	40.3

SOURCE. — *Reichsarbeitsblatt* (Statistical Supplement), 5 Nov. 1932.

III. — Short Time among Trade Union Members (September 1932)

Unions and occupational groups	Percentage unemployed	Percentage of those employed working short time	Estimated extent of short time worked by those on short time: hours per week
China-ware workers ¹	45.0	65.6	16.2
Boot and shoe workers	36.1	62.1	16.6
Textile workers	34.8	59.4	15.2
Metal workers	48.7	54.2	16.4
Chemical workers ¹	33.5	54.1	12.6
Clothing workers	44.3	53.7	— ²
Papermakers ¹	29.0	53.0	15.4
Engineers and stokers	35.3	52.6	14.2
Bookbinders	44.0	51.4	16.8
Food and drink workers	22.2	46.8	9.4
Tobacco workers	42.4	45.3	13.4
Leather workers	28.0	37.5	14.1
Lithographers	46.3	36.5	14.2
Miners	19.7	36.4	13.7
Saddlers, upholsterers and leather goods workers	65.7	36.4	16.9
Woodworkers	65.8	31.3	14.6
Federation of workers in the public services and in passenger services and goods transport undertakings	18.2	29.7	9.4
Hatters	43.6	28.2	12.9
Printers	37.4	27.6	9.1
Unskilled workers in printing and allied trades	36.1	27.2	14.5
Glassworkers ¹	52.5	25.9	13.2
Workers in sugar, preserving and vegetable fat industries ¹	37.4	25.6	9.4
Brick, tile, etc., workers ¹	59.9	22.9	13.9
Stoneworkers	64.0	22.2	17.3
Painters	80.6	21.1	10.2
Factory workers ¹ not included in above groups	24.1	9.0	16.5
Building Operatives' Union	77.1	—	—
Carpenters	77.8	—	—
Total	44.1	39.4	13.7

¹ In General Factory Workers' Union.

² Not supplied.

SOURCE. — *Gewerkschafts-Zeitung*, published by the General Federation of German Trade Unions, 22 Oct. 1932.

5. GERMANY (CERTAIN INDUSTRIES)

Average Working Hours in Certain Industries: Summary of Results

Industry	Electrical	Iron and steel	Chemical	Confectionery	Wood, (building timber, furniture)	Textiles	Paper	Building
Date of enquiry	Oct. 1934	Oct. 1931	June 1931	March 1934	March 1934	Sept. 1930	May 1930	Aug. 1929
Source: <i>Wirtschaft und Statistik</i>	1932, No. 14	1932, No. 12	1932, No. 6	1934, No. 21	1934, No. 20	1934, No. 12	1931, No. 7	1931, No. 4
Number of undertakings covered	31	44	408	299	1,195	466	327	7,282
Number of workers employed in above undertakings	60,429	40,635	59,466	33,405	21,442	55,795	27,499	238,104
Average number of hours worked per week by undertakings covered by enquiry	39.27 1 2	41.46 1 2	44.29 1 2	44.8	40.1	42.23 2	44.0 2	8.08 3
Percentage of trade union members 4 recorded as working short time in similar occupations at time of enquiry	— 5	30.3 6	20.8	14.7	12.9	10.1	15.6	0.1

1 Excluding absence due to illness, leave or engagements or dismissals occurring during the enquiry.

2 Excluding hours giving rise to special overtime rates.

3 Per day, and referring to 86.4 per cent. of the workers covered by the enquiry.

4 For trade unions covering similar occupations to those covered by the enquiry.

5 No separate figure.

6 Engineering and metalworkers.

7 Approximate.

SOURCE. — *Wirtschaft und Statistik* (various months).

6. GERMANY (SALARIED EMPLOYEES)

Short Time among Salaried Employees: Summary of Results (June 1932)

		Percentage
Number of undertakings covered	3,539	100.0
Number of undertakings in which salaried employees work short time.	1,500	42.4
Number of salaried employees covered. .	171,000	100.0
Number of salaried employees working full time	113,360	66.3
Number of salaried employees working short time	57,640	33.7
Numbers working 1 to 5 hours short.	18,131	10.6
" " 6 " 8 " "	26,294	15.4
" " 9 " 16 " "	11,612	6.8
" " 17 " 24 " "	1,406	0.8
" " over 24 " "	197	0.1

SOURCE. — *Afa Bundeszeitung*, Sept. 1932. Associations participating in the enquiry: Zentralverband der Angestellten, Deutscher Werkmeisterverband, Bund der technischen Angestellten und Beamten, Werkmeisterverband der Schuhindustrie, Fördermaschinenistenverband.

7. GREAT BRITAIN

Some Indications on Short Time (19-24 September 1932)

Industry	Cotton ¹	Wool	Worsted	Carpet section of woollen industry	Boot and shoe	Pottery	Brick
Numbers employed ²	379,252	188,936			110,352	56,796	67,071
Numbers covered by returns	58,700	50,982	71,223	10,147	56,685	9,595	8,158
Percentage of workers covered by returns to numbers employed	15.5	70.1			51.4	16.9	12.2
Percentage working short time	15	35	24	13	46	45 ½	16
Extent of short time for each worker (hours per week)	17	13	13	13	10 ½	12 ½	15
Assumed normal hours of work	48	48	48	48	48	47	48
Average working week (excluding overtime)	45.45	43.45	44.88	46.31	43.17	41.31	45.6

¹ Owing to the figures for September being affected by industrial disputes, the figures for the week ended 23 July 1932 are given.

² Estimated number of insured persons (sixteen to sixty-four years of age) at July 1931 less numbers wholly unemployed or temporarily stopped in similar groups at 26 September 1932.

SOURCE. — Based on figures given in the *Ministry of Labour Gazette*, Oct. 1932.

8. ITALY

Percentage of Workers on Short Time (22-27 August 1932)

Industries	Number of undertakings covered	Number of workers in employment	Percentage of workers doing less than a normal week to those in employment
Hats	120	13,128	61.8
" Rayon " industry	27	12,939	56.8
Jute	46	9,625	54.8
Silk weaving	198	18,764	44.9
Linen and hemp	134	15,585	39.3
Re-smelting foundries	294	13,255	37.2
Cotton	1,090	137,043	37.0
Electrical equipment	153	18,335	31.4
Specialised engineering	347	47,478	30.6
Iron and steel	71	43,436	30.5
Paper	271	20,364	30.2
Wool	520	66,814	30.1
General engineering	690	47,491	29.1
Italian paste	645	13,950	27.4
Knitted goods	186	11,699	24.1
Skins and hides	335	8,933	23.5
Hosiery	217	15,823	22.8
Rubber	37	11,341	16.4
Motor-cars	21	18,989	15.9
Railway equipment	65	17,993	14.8
Cement	138	8,598	13.0
Superphosphates	87	3,846	9.8
Shipyards	33	18,279	5.6
Silk spinning and throwing	776	35,928	3.6
Total	6,501	629,636	29.8

SOURCE. — *Bollettino mensile di Statistica*, published by the Istituto Centrale di Statistica, Oct. 1932.

9. POLAND

Average Working Hours in the Manufacturing Industries (June 1932)

Industry	Number of workers employed	Number of hours worked per worker per week	Percentage of workers employed		
			1-3 days a week	4-5 a week days a week	6-7 day a week
Engineering	17,478	39.3	9.2 ¹	26.9 ¹	63.9 ¹
Food and drink	36,839	39.9	10.6	30.6	58.8
Textile	100,581	40.1	15.9	29.8	54.3
Metal	22,881	40.4	9.2 ¹	26.9 ¹	63.9 ¹
Electrical engineering	3,080	41.2	9.2 ¹	26.9 ¹	63.9 ¹
Clothing	8,647	42.3	6.8	18.9	74.3
Hides and skins	4,051	42.4	10.1	19.7	70.2
Wood	27,953	42.5	9.0	17.9	73.1
Paper	10,076	42.6	9.0	21.1	69.9
Building	10,518	43.1	7.7	11.0	81.3
Printing	7,825	43.2	5.1	6.4	88.5
Mineral working ²	32,171	44.1	5.6	16.6	77.8
Chemical	25,675	45.4	5.2	14.9	79.9
Total	307,775	41.5	10.6	23.8	65.6

¹ General average for the engineering, electrical engineering and metal-working industries.

² Including cement works, lime kilns, brick works, glass works and pottery and crockery works.

SOURCE. — *Statystyka Pracy*, published by the Central Statistical Office, 11th Year, Vol. 3.

10. SWEDEN

Average Hours Worked in Sweden (15 March 1932)

Industry	Number of undertakings	Number of workers	Average hours per week
Ore-mining and metal industry :			
Ore mines	33	6,596	30
Working up of ores	42	20,988	43
Iron and steel manufactures	66	7,576	43
Engineering	215	30,443	42
Shipbuilding	13	5,562	44
Electrical engineering	22	8,041	43
Other metal industry	46	3,434	41
Earth and stone industry :			
Coal mines	7	1,210	43
Peat industry	11	108	41
Stone quarrying and cutting	38	4,350	38
Tiles, pottery, china industry	7	944	44
Brickworks	47	1,729	43
Glass works	21	2,584	44
Cement factories and lime-kilns	27	3,128	43
Wood industry :			
Sawmills	132	11,454	45
Joinery and cabinet-making	126	5,152	41
Other woodworking	16	767	44
Paper and printing industry :			
Woodpulp factories	58	11,382	47
Paper factories	35	10,555	47
Bookbinding, etc.	40	2,729	47
Printing, lithography, etc.	86	6,058	48
Food industry :			
Milling	20	1,172	47
Bakeries	47	2,413	48
Sugar industry	24	2,658	47
Chocolate and sweet factories	25	2,974	46
Breweries and distilleries	65	3,517	47
Tobacco factories	11	2,522	48
Other food industry	51	2,608	48
Textile and clothing industry :			
Cotton industry	39	15,048	46
Jute and linen industry	9	2,909	47
Woollen industry	49	8,050	47
Knitted goods factories	26	4,897	47
Tailoring and dressmaking, etc.	62	7,777	47
Other similar trades	56	4,118	46
Leather, hair and rubber industry :			
Tanneries and leather factories	16	1,571	45
Boot and shoe factories	55	6,579	39
Rubber goods factories	6	3,946	40
Other similar industries	29	1,201	40
Chemical industry :			
Candle, soap and oil factories	25	1,438	46
Fertiliser factories	8	718	48
Match factories	10	4,504	42
Other chemical industries	26	2,278	48
Building and construction	78	2,593	43
Power, light and water works	38	5,750	47
Commerce and warehousing	31	2,622	48
Total	1,894	238,653	45

SOURCE. — *Sociala Meddelanden*, published by the Ministry for Social Affairs, May 1932.

11. UNITED STATES (BUREAU OF LABOUR STATISTICS)

I. — Average Hours Worked and Percentage Working More than Forty or Thirty-six Hours a Week (May 1932)

Industry	Plants	Em- ployees	Average hours worked per employee per week	Percent- age of employees working more than 40 hours a week	Percent- age of employees working more than 36 hours a week
89 manufacturing industries	9,200	1,500,855	37.3	33.4	50.3
<i>Non-manufacturing industries:</i>					
Anthracite coal	133	84,138	31.0	11.7	27.0
Bituminous coal	706	103,395	24.7	8.2	14.9
Metalliferous mining	214	21,714	39.9	49.0	56.2
Quarrying and non-metallic mining	463	17,714	39.0	50.0	59.2
Production of crude petroleum	145	12,620	52.5	95.6	96.9
Wholesale trade	1,089	26,887	47.8	88.1	92.9
Retail trade	3,047	113,153	44.3	— ¹	— ¹
Telephone and telegraph	6,305	242,420	40.0	43.8	95.5
Power and light	1,955	144,249	45.9	81.9	97.0
Electric-railroad and motorbus operation and maintenance	364	88,972	49.5	— ¹	— ¹
Hotels	825	38,555	51.6	— ¹	— ¹
Laundries	457	26,770	43.7	72.8	87.2
Dyeing and cleaning	204	6,084	46.8	79.8	96.0
Canning and preserving	418	13,563	43.6	64.7	78.5
Grand total, manufacturing and non-manufacturing	25,525	2,441,089	41.1	35.0 ¹	57.4 ¹

¹ Excluded on the assumption that the forty-hour week might not be applicable to these occupations.

SOURCE. — *Monthly Labour Review*, Sept. 1932.

II. — Average Hours Worked per Week in Representative Manufacturing Industries (May 1932)

Industry	Numbers employed in undertakings covered	Average hours of work
Cotton goods	122,034	39.9
Hosiery and knit goods	48,773	38.8
Automobiles	206,876	37.4
Sawmills	32,327	37.2
Boots and shoes	26,021	36.7
Steam railroad repair shops.	42,368	36.5
Brick, tile and terra cotta	9,660	33.6
Foundries and machine shops	63,151	31.1
Iron and steel	160,013	26.3

SOURCE. — *Monthly Labour Review*, Sept. 1932.

12. UNITED STATES (NATIONAL INDUSTRIAL CONFERENCE BOARD)

Average Hours Worked in Certain Industries (September 1932)

Industry	Average hours of work per wage earner
Automobile	24.2
Iron and steel	24.9
Electrical manufacturing	26.6
Foundries and machine shops	29.0
Rubber	29.8
Agricultural implement	32.5
Printing: book and job	37.5
Furniture	37.7
Lumber and millwork	38.3
Paper and pulp	39.7
Hosiery and knit goods	40.8
Printing: news and magazines	41.0
Paper products	41.5
Wool	42.0
Chemical	42.0
Paint and varnish	42.2
Leather tanning and finishing	42.8
Boot and shoe	44.5
Cotton: North	47.2
Silk	47.2
Meat packing	48.8
Weighted average	34.8

SOURCE. — *The Service Letter on Industrial Relations*, published by the National Industrial Conference Board, Inc., Oct. 1932.

13. UNITED STATES (AMERICAN FEDERATION OF LABOUR)

Unemployment and Short Time among Members of the American Federation of Labour (September 1932)

Group	Percentage unemployed	Percentage of those employed working "part time"
All trades	32	32
Building trades	65	43
Metal trades	46	50
Printing trades	20	50
All other trades	20	26

SOURCE: AMERICAN FEDERATION OF LABOUR: *Unemployment Report*.

14. NETHERLANDS

*Number of Undertakings Authorised to Prolong Working Time;
Duration of Permit and of Extent of Overtime Authorised per Week*

Year	Num-ber of under-takings grant-ed a permit	1-14 days				15 days up to 1 month				Over 1 month up to 3 months			
		5 hrs. or less	Over 5 hrs. and up to 7 ½ hrs.	Over 7 ½ hrs.	Total	5 hrs. or less	Over 5 hrs. and up to 7 ½ hrs.	Over 7 ½ hrs.	Total	5 hrs. or less	Over 5 hrs. and up to 7 ½ hrs.	Over 7 ½ hrs.	Total
1923	9,842	—	—	—	7,679	—	—	—	1,220	—	—	—	3,299
1924	10,286	—	—	—	9,858	—	—	—	1,666	—	—	—	5,000
1925	10,217	—	—	—	9,201	—	—	—	1,723	—	—	—	4,655
1926	10,111	—	—	—	7,360	—	—	—	1,559	—	—	—	4,100
1927	10,077	4,401	2,935	965	8,301	756	930	163	1,849	2,175	2,001	179	4,355
1928	10,799	4,169	3,324	1,019	8,512	1,010	961	196	2,167	2,232	2,170	190	4,599
1929	11,594	4,573	3,259	998	8,830	1,145	1,319	331	2,795	2,358	1,758	231	4,344
1930	10,238	3,989	2,344	757	7,090	631	706	138	1,475	1,534	1,321	150	3,000
1931	8,881	4,013	1,702	547	6,262	516	440	143	1,099	1,179	809	238	2,226

Year	Over 3 months up to 6 months				Over 6 months			
	5 hrs. or less	Over 5 hrs. and up to 7 ½ hrs.	Over 7 ½ hrs.	Total	5 hrs. or less	Over 5 hrs. and up to 7 ½ hrs.	Over 7 ½ hrs.	Total
1923	—	—	—	2,158	—	—	—	863
1924	—	—	—	2,147	—	—	—	1,032
1925	—	—	—	2,009	—	—	—	902
1926	—	—	—	2,089	—	—	—	993
1927	570	1,381	122	2,073	131	693	133	962
1928	637	1,409	115	2,161	130	545	168	843
1929	589	1,103	179	1,871	453	654	217	1,324
1930	1,085	929	176	2,190	194	672	244	1,110
1931	1,219	693	159	2,071	241	392	452	1,085

SOURCE. — *Centraal Verslag der Arbeidsinspectie in het Koninkrijk der Nederlanden door het Departement van Arbeid, Handel en Nijverheid* (annual).

15

*Summary of Estimate¹ of Re-Employment in Germany Prepared by the
Institut für Konjunkturforschung (End of August 1930)*

Numbers Fully Employed

Workers²

Estimate of total number of wage earners in industry . . .	10,500,000
Less fully unemployed persons	8,200,000
Less those on short time (based on trade union returns) . .	6,400,000

¹ The original text of this estimate, as well as of the three others which follow it, contain a number of reservations not reproduced here, called for in particular by the use of an "arithmetical method" tending to redistribute man-hours worked on the basis of a forty-hour week, and by the character of the data used and the deductions drawn from them, involving, as they do, many implicit assumptions of doubtful validity.

² For the estimates given under 15, 16, 17 and 18, the figures in this column denote the result obtained after the deductions or additions mentioned opposite them.

	Workers
Less an estimate for those whose normal hours are below 48 in the week	6,000,000
Plus an estimate for those on short time, but working more than 40 hours a week	7,100,000
A redistribution of the estimated man-hours worked by these 7,100,000 workers would provide employment, on the basis of a 40-hour week, for	8,600,000
Unemployment could therefore be diminished by a maximum of	1,500,000
(which figure would be reduced by reason of the geographical and inter-occupational immobility of labour.)	

SOURCE. — *Wochenbericht des Instituts für Konjunkturforschung*, 15 Oct. 1930.

16

Summary of Estimate by the Federal Placing and Unemployment Insurance Institute in Germany (January 1931)

	Workers
Number of wage earners and apprentices in industry and handicrafts (1925 Census)	9,400,000
Deduct: (a) persons in undertakings employing less than 10 persons (including clerical and administrative staff)	5,800,000
(b) mining, building, stone-cutting and quarrying	
Add: Increase in persons employed between 1925 and 1929 (annual statistics of the inspectors of factories) in the industries covered	6,700,000
Deduct: (a) persons on sickness insurance (4.1 per cent. in January 1931);	4,700,000
(b) increase in unemployment (from 1929 to January 1931);	
Estimated number of persons employed in industry in January 1931	
If account be taken of overtime (affecting in February 1930 17.2 per cent. of trade union members) and short time (affecting in January 1931 19.2 per cent. of trade union members), there remain 218 million man-hours per week available for redistribution, which would increase employment by	730,000
Deduct: about 20 per cent. for difficulties arising out of the geographical immobility of labour	584,000
Add: if required, allowance for re-employment in mining, building, stone-cutting and quarrying	1,000,000

SOURCE. — "Gutachten zur Arbeitslosenfrage", Part I, issued as a supplement to the *Reichsarbeitsblatt*, 1931.

17

Summary of Estimate of Re-Employment Prepared by the German Federation of Trade Unions (June 1931)

1. Overtime:

The German Federation of Trade Unions estimated in February 1931 that 18.3 per cent. of their members were working more than 48 hours a week. If this were generalised over the 11 to 12 million workers employed in industry and commerce, building excepted, it could be assumed that there would be 8 to 9 million man-hours

available for distribution, which would provide employment, on the basis of a 40-hour week, for 200,000 to 225,000 workers. Allowing for the fact that some overtime may be inevitable, it is estimated that workers could be taken on to the extent of	Workers 100,000
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2. *Reduction of hours of work in industry:*

The number of workers in industries in which hours of work might be reduced (small undertakings excepted) is estimated at	7,000,000
<i>Deduct</i> those engaged in building and some other occupations	6,000,000
<i>Deduct</i> those working short time (about 20 per cent)	4,800,000
<i>Deduct</i> an allowance for undertakings in which, for various reasons, the reduction of hours of work could not be applied	3,800,000
The reduction of hours of work from 48 to 40 a week for those workers would permit an approximate re-employment of	700,000 to 750,000
<i>Deduct</i> an allowance for the increase in hours of work worked by those who are working less than 40 hours a week	600,000 to 650,000
<i>Deduct</i> 20 to 25 per cent. of the above figure to allow for increased productivity per head, incomplete application of the reduction in hours, and so forth	500,000

3. *Reduction of hours of work for railwaymen and Post Office workers:*

About 1,000,000 are employed by the Federal Railways and the Post Office. Allowing for short time and for technical difficulties, the increase in employment might amount to	100,000
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4. *Restrictions of overtime and reduction of hours of salaried employees:*

A conservative estimate is	100,000
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Summary:

Number of workers who could be re-engaged through a reduction in hours of work to 40 in the week:

1. Restriction of overtime	100,000
2. Reduction of hours in industry	500,000
3. Reduction of hours for railwaymen and Post Office workers	100,000
4. Restriction of overtime and reduction of hours of work of salaried employees.	100,000
Total	800,000

SOURCE. — *Die 40-Stunden Woche, Untersuchungen über Arbeitsmarkt, Arbeitsertrag und Arbeitszeit*, p. 220.

Summary of Estimate of Re-Employment in Germany Prepared by Dr. Jacoby (March 1932)

Number employed in industry (figures of 1925 Census less those working in undertakings employing less than 10 workers)	Workers 4,649,500
<i>Deduct</i> estimated number of workers on short time (on the basis of trade union returns for March 1932)	2,452,935

	Workers
The reduction of hours from 48 to 40 for these workers would permit the re-employment of about	490,000
Add 20 per cent. of the 160,000 workers employed by the railways on administration and goods and passenger services.	522,000
Add 20 per cent. of the 368,000 persons employed in Government services and by local authorities	595,000
Add 20 per cent. of 400,000 workers engaged in the building trades	675,000
Deduct about 20 per cent. of the above figure to allow for exceptions	about 500,000

SOURCE. — *Reichsarbeitsblatt*, 25 May 1932.

APPENDIX IV

WAGES AS AN ELEMENT IN THE COST OF PRODUCTION, 1926-1931

The following tables I to IV summarise the official information available as to the proportion which wages (or wages and salaries) form of the net output of manufacturing industry in recent years. The statistics on this subject are not strictly comparable between different countries, or even for the same country as between different dates, and the following points indicate the principal reservations to which they are subject:

- (1) *Establishments covered.* — The figures are often limited to establishments employing more than a certain number of employees, or having more than a certain value of output, etc. The exact scope in this respect is indicated in the notes (page 195) for each country.
- (2) *Branches of industrial activity covered.* — The figures do not cover all categories of industrial activity — building and contracting, production and distribution of gas, water and electricity are sometimes excluded; also mining, which sometimes forms the subject of special statistics (see table VI). Details are given in the general note to table I.
- (3) *Definition of wages and salaries.* — The borderline between “wages” and “salaries” is not identical in different countries, and in the term “salaries” the fees and salaries of directors, working proprietors, etc., are sometimes included.
- (4) *Net output.* — The “net output” (or “value added by manufacture”) should cover the total amount of income out of which labour, management, ownership of land and capital are remunerated and should be based on the total payment received for the goods produced less the payments made to other establishments for materials, services, etc. with due allowance for depreciation, etc. But this definition is not always applied, the “cost of materials, etc.” is sometimes limited to raw materials, sometimes the cost of fuel, light and power is included in this cost.

In view of the above differences, it has not been considered advisable to give the aggregate amounts of wages, salaries and net output, but only the percentage which wages (or wages and salaries) bear to the “net output”. These percentages are less subject to variation due to the above factors, than the aggregate figures themselves.

In order to make the figures more comparable an attempt has been made to limit the general figures to a list of industries common to all countries, i.e. mining, quarrying; building; gas, water and electricity

undertakings, such services as laundering, dyeing and cleaning have been excluded from the computation in those cases where they were included in the general totals (see table I). Owing to the great differences in the classification of manufacturing industries, it is generally not possible to compare different industrial groups, but computations have been made for two large groups, viz. metals and engineering on the one hand (table II); and textiles, clothing and boots on the other (table III), covering for each country roughly the same branches of activity. A third group covering all the remaining industries is added (table IV). Thus, some indication is available as to the differences in the proportion of wages as an element in the cost of production.

Where separate information on "wages" is available, this has been used; the percentage of "wages and salaries" is only given where separate figures for wages alone are not available.

It is not possible to make allowances for the other factors of incomparability, viz. differences in limits of the size of establishments included; in methods of computing net output, etc. Attention should be directed primarily to the changes in the figures from year to year, and not to the changes from country to country.

It has been pointed out above why figures of aggregate value of net production, of wages, salaries, etc. are not given, but in order to throw some light on the total volume of business activity as compared with the proportions paid in wages, etc., table V is added giving a summary description of the general business situation in seven of the eleven countries considered.

Table VI (on coal mining) gives the information available for certain countries on the percentage of the total labour costs to the average selling price of coal. It should be noted that these percentages are not comparable to those given in the preceding tables, to the extent to which average selling price covers the costs of materials and services used.

As no official figures are available for the chief European countries, it has been thought desirable to add a table for the United Kingdom taken from the recent Report of the Committee on Industry and Trade, which gives some indications for certain selected establishments (table VII).

Tables I-IV, VI and VII cover only a limited part of the national economic activity, but in order to give a more general, though less exact, idea of the importance of income from labour relatively to the other elements of the national income, table VIII gives the percentages of the national income of a few countries paid as wages (or salaries and wages) before the war and during recent years.

TABLE I. — PERCENTAGE OF WAGES (W) OR WAGES AND SALARIES (WS), TO THE NET OUTPUT OF MANUFACTURE

Year	Estonia (W)	Finland (W)	Hungary ¹ (W)	Irish Free State (W)	Latvia (WS)	Nor- way (W)	U.S.A. ² (W)	Canada (WS)	South Africa (WS)	New Zea- land (WS)	Aus- tralia (W)
1926	—	38.4	20.8	35.5	41.9	—	—	45.2	51.3	50.6	49.9
1927	42.1	36.9	27.8	—	41.5	39.9	39.7	45.3	50.9	50.4	51.5
1928	40.8	37.9	27.9	—	41.4	38.4	—	42.8	50.3	50.0	48.6
1929	43.8	38.8	28.0	35.6	44.1	38.9	37.2	42.0	50.2	49.4	48.0
1930	42.5	38.0	26.2	—	47.6	41.6	—	43.2	51.3	49.8	47.9
1931	—	—	28.4	—	—	—	—	—	—	—	46.1

¹ Blast furnaces are excluded.

² The figures for preceding census years are: 1919, 42.4; 1921, 45.3; 1923, 43.1; 1925, 40.6. The production of coke (not including gas-house coke) and petroleum refining are excluded.

Note. — The figures are for calendar years except for South Africa and Australia (years ended June) and New Zealand (years ended March). Wages generally include remuneration for all manual labour, except for the Irish Free State, where outworkers' earnings are excluded. Salaries generally do not cover working proprietors' incomes, except for New Zealand. Net output is computed by deducting from the gross value of output (generally including payments received for work done) the cost of materials used (generally including the cost of fuel, light and power), except for Estonia where the gross value of output includes the value of electricity, sold by establishments other than power stations, for Canada, South Africa and New Zealand, where only the cost of materials used, but not the cost of fuel, light and power is deducted from the gross value of output, and for Finland, where the cost of materials does not include the cost of electric power used. The figures exclude mining and quarrying, building and construction of works, and gas, water and electricity undertakings.

TABLE II. — PERCENTAGE OF WAGES (W), OR WAGES AND SALARIES (WS), TO THE NET OUTPUT OF THE METAL AND ENGINEERING INDUSTRIES (INCLUDING BUILDING AND REPAIRING OF VEHICLES AND SHIPS)

Year	Estonia (W)	Finland (W)	Hungary ¹ (W)	Irish Free State ² (W)	Latvia (WS)	Nor- way (W)	U.S.A. ⁴ (W)	Canada ^{2,3} (WS)	South Africa (WS)	New Zea- land (WS)	Aus- tralia (W)
	8 %	14 %	26 %	9 %	21 %	25 %	38 %	26 %	32 %	7 %	28 %
	(W)	(W)	(W)	(W)	(WS)	(W)	(W)	(WS)	(WS)	(WS)	(W)
1926	49.5	55.9	39.4	62.4	56.2	—	—	52.0	75.9	65.1	59.3
1927	62.5	52.0	40.9	—	65.1	56.1	46.8	49.7	75.9	64.7	60.9
1928	54.3	57.4	36.6	—	59.3	51.1	—	49.1	74.2	64.5	59.7
1929	49.3	54.4	35.7	74.9	53.3	51.6	42.4	47.2	73.4	61.0	58.1
1930	50.0	60.0	33.1	—	59.1	54.6	—	50.6	74.3	62.7	58.4
1931	—	—	39.8	—	—	—	—	51.9	—	—	58.3

¹ Blast furnaces are excluded.

² Ship-building is excluded.

³ Bridge building and structural steel works are excluded.

⁴ The figures for preceding census years are as follows: 1919, 38.2; 1921, 32.1; 1923, 36.8; 1925, 36.6.

Note. — In order to give a rough idea of the importance of the industry within manufacturing as a whole, the percentage of its net output to the total net output of manufacturing for 1930 is given in the heading to each column. See also the general note to table I.

TABLE III. — PERCENTAGE OF WAGES (W), OR WAGES AND SALARIES (WS), TO THE NET OUTPUT OF THE TEXTILE INDUSTRY (INCLUDING CLOTHING, AND BOOTS AND SHOES)

Year	Estonia (26 %) (W)	Finland (13 %) (W)	Hungary (17 %) (W)	Irish Free State ¹ (7 %) (W)	Latvia (19 %) (WS)	Norway (11 %) (W)	U.S.A. ² (15 %) (W)	Canada (12 %) (WS)	South Africa (9 %) (WS)	New Zealand (9 %) (WS)	Australia (16 %) (W)
1926	47.1	44.5	24.1	53.5	37.2	—	—	55.7	53.1	68.5	53.8
1927	49.8	40.0	30.6	—	40.3	45.6	44.3	53.8	53.6	69.1	53.7
1928	49.0	43.4	31.3	—	39.1	46.8	—	55.0	53.3	66.9	53.6
1929	51.4	42.6	30.3	52.7	50.6	46.2	42.3	52.8	54.8	65.6	53.8
1930	44.9	41.0	30.5	—	48.6	47.5	—	50.2	54.1	64.2	54.8
1931	—	—	31.4	—	—	—	—	53.2 ³	—	—	50.8

¹ Only wholesale factories producing clothing and boots and shoes are included.

² The figures for preceding census years are as follows: 1919, 17.6; 1921, 20.0; 1923, 18.1; 1925, 16.3.

³ This figure relates only to the woollen section of the textile industry. The corresponding figure for 1930 was 50.8.

Note. — In order to give a rough idea of the importance of the industry within manufacturing as a whole, the percentage of its net output to the total net output of manufacturing for 1930 is given in the heading to each column. See also the general note to table I.

TABLE IV. — PERCENTAGE OF WAGES (W) OR WAGES AND SALARIES (WS) TO THE NET OUTPUT OF MANUFACTURING INDUSTRIES OTHER THAN METALS AND ENGINEERING; AND TEXTILES CLOTHING AND BOOTS AND SHOES

Year	Estonia (66 %) (W)	Finland (73 %) (W)	Hungary (57 %) (W)	Irish Free State (84 %) (W)	Latvia (60 %) (WS)	Norway (64 %) (W)	U.S.A. ¹ (47 %) (W)	Canada (62 %) (WS)	South Africa (59 %) (WS)	New Zealand (74 %) (WS)	Australia (56 %) (W)
1926	—	34.1	15.0	32.4	39.5	—	—	40.3	37.6	45.8	44.0
1927	37.8	33.7	21.9	—	36.8	34.7	33.0	41.7	37.4	45.5	45.9
1928	36.8	33.0	23.2	—	38.1	32.9	—	37.7	37.0	45.1	41.5
1929	40.5	34.6	23.5	30.0	39.9	32.9	31.2	37.6	37.0	44.9	41.0
1930	40.7	33.2	21.8	—	43.3	35.4	—	37.6	38.4	45.1	40.7
1931	—	—	23.3	—	—	—	—	—	—	—	39.5

¹ The figures for preceding census years are as follows: 1919, 44.1; 1921, 47.9; 1923, 45.1; 1925, 47.1.

Note. — In order to give a rough idea of the importance of the industries within manufacturing as a whole, the percentage of their net output to the total net output of manufacturing in 1930 is given in the heading to each column. See also the general note to table I.

NOTES TO TABLES I-IV

ESTONIA

Source: 1926-1929: *Estonie de 1920-1930, Résumé rétrospectif*, pp. 140-143; Tallinn, 1931. 1930: *Eesti Statistika*, Dec. 1931, pp. 732-733.

Scope: Establishments employing 20 or more persons.

FINLAND

Source: *Statistisk Årsbok*, 1927-1931.

Scope: All establishments irrespective of size.

HUNGARY

Source: 1926-1930: *Annuaire Statistique Hongrois*, 1926-1930. 1931: *Magyar Statisztikai Szemle*, Sept. 1932, pp. 751-762.

Scope: All establishments irrespective of size.

IRISH FREE STATE

Source: *Irish Trade Journal*, Sept. 1922, pp. 100-101.

Scope: A number of small establishments usually having an output of less than £300 are excluded.

LATVIA

Source: 1926-1927: *Annuaire Statistique de la Lettonie*, 1926-1927. 1928: *Bulletin mensuel* (Bureau de Statistique de l'État Letton), Dec. 1929, p. 642. 1929: *idem*, Oct. 1930, p. 608. 1930: *idem*, Nov. 1931, p. 796.

Scope: Establishments employing 50 persons or more.

NORWAY

Source: *Norges Industri* 1927, 1928-1929, 1930 (Norges Offisielle Statistikk, Series VIII, Nos. 110, 161, 178).

Scope: Generally, all establishments reporting at least 12,000 man-hours in the year.

UNITED STATES OF AMERICA

Source: *Statistical Abstract of the United States*, 1931, pp. 816-817.

Scope: Establishments reporting products valued at \$5,000 or more.

CANADA

Source: 1926-1929: *The Canada Yearbook*, 1929-1932. 1930: *Preliminary Report on the Manufacturing Industries*, 1930. 1931: *Preliminary Reports on the Manufactures of the Non-Ferrous Metals, on Iron and Steel and their Products and on the Woollen Textile Industries*, 1931.

Scope: All establishments, irrespective of the number of employees.

UNION OF SOUTH AFRICA

Source: *Statistics of Production*, 1925/26-1929/30 (for years ending June).

Scope: Establishments employing 3 or more persons, or using motive power.

NEW ZEALAND

Source: *The New Zealand Official Yearbook*, 1932.

Scope: Establishments employing at least 2 persons or using motive power.

COMMONWEALTH OF AUSTRALIA

Source: 1925/1926-1929/1930: *Official Yearbook*, 1927-1931. 1930-1931: *Summary of Australian Production Statistics for the Years 1920-1921 to 1930-1931*, Production Bulletin No. 25, pp. 87-89 and 96.

Scope: Establishments employing 4 or more persons or using motive power.

TABLE V. — BUSINESS FLUCTUATIONS IN SEVEN COUNTRIES, 1926-1931

(Roman numbers indicate the duration of the phases by quarters when the change from one phase to the other occurred in the course of a year)

Year	Australia	U.S.A.	Hungary	South Africa	Canada	New Zealand	Norway
1926	Prosperity	Prosperity	Revival	Prosperity	Prosperity	Depression	Depression
1927	Prosperity (I-III) Recession (IV)	Prosperity (I-II) Recession (III-IV)	Prosperity	Prosperity	Prosperity (I-III) Slight recession (IV)	Depression (I) Revival (II-IV)	Depression
1928	Depression	Revival (I) Prosperity (II-IV)	Prosperity	Prosperity	Revival (I) Prosperity (II-IV)	Prosperity	Depression (I) Revival (II-IV)
1929	Depression	Prosperity (I-II) Recession (III-IV)	Prosperity (I-II) Recession (III-IV)	Prosperity (I-II) Recession (III-IV)	Prosperity (I-III) Recession (IV)	Prosperity	Revival
1930	Depression	Depression	Depression	Depression	Depression	Prosperity (I) Recession (II-IV)	Revival (I-II) Recession (III)
1931	Depression	Depression	Depression	Depression	Depression	Depression	Recession (I) Depression (II-IV)

Source: W. L. THORP: "The Depression as Depicted by Business Annals", in *National Bureau of Economic Research News Bulletin*, No. 43.

TABLE VI. — PERCENTAGE OF AVERAGE LABOUR COST PER TON TO AVERAGE NET SELLING VALUE PER TON OF SALEABLE COAL, 1925-1931

Year	Germany ¹		Belgium ²	France ¹	Great Britain ³	Czechoslovakia ¹
	Ruhr	Upper Silesia				
1925	57.8	—	67.8	63.5	76.6	44.3
1927	57.8	47.3	60.6	56.4	72.5	44.3
1929	53.7	49.2	58.8	54.5	68.8	43.1
1931	52.0	48.3	—	—	69.2	46.4

¹ Computed on the basis of the "valeur moyenne de la tonne sur le carreau de la mine" (average pit head price) (*Wert je Tonne verwertbarer Kohle ab Grube.*)

² Computed on the "valeur moyenne de la tonne".

³ Computed on the "average net selling value per ton of saleable coal".

Note. — The above percentages have been obtained by relating the average labour cost per ton (including employers' insurance contributions) to the average selling value per ton of saleable coal at the pit-head. The data on labour cost have been taken from the International Labour Office's biennial enquiries into wages and hours of work in the coal mining industry, and the figures on average selling value in the following publications: Germany: *Vierteljahrshefte zur Statistik des Deutschen Reichs*; Belgium: *Statistique des industries extractives et métallurgiques et des appareils à vapeur en Belgique*; France: *Statistique de l'industrie minière et des appareils à vapeur en France et en Algérie*; Great Britain: *Annual Reports of the Secretary of Mines*; Czechoslovakia: *Mitteilungen des Statistischen Staatsamtes der C. S. R.*, 1932, Nos. 103-109.

TABLE VII. — PERCENTAGE DISTRIBUTION OF COSTS OF PRODUCTION IN SELECTED INDUSTRIES IN GREAT BRITAIN UNDER THREE MAIN HEADS, IN THE PRE-WAR AND POST-WAR PERIODS

Industry	Pre-war period (total = 100)			Post-war period (total = 100)		
	Materials	Wages and salaries	Other expenses	Materials	Wages and salaries	Other expenses
Coal mining ¹	Per cent. 11.4	Per cent. 75.3	Per cent. 13.3	Per cent. 10.3	Per cent. 74.3	Per cent. 15.4
Coke making Plant A	84.9	10.3 ³	4.8	85.2	8.3 ³	6.5
Gas	10.2	45.7	44.1	12.9	46.1	41.0
Iron and Steel						
Basic pig iron	84.3	8.6	7.1	80.9	8.7	10.4
Steel ingots	84.7	7.3	8.0	79.3	7.6	13.1
Hematite pig iron	90.8	5.9 ³	3.3	82.9	10.6 ³	6.5
Wire	75.5	16.9	7.6	67.9	21.1	11.0
Engineering						
Agricultural machinery ¹	46.5	36.3 ³	17.2	37.0	37.7 ³	25.3
Locomotive construction ¹	59.0	32.0 ³	9.0	46.0	36.0 ³	18.0
Pedal bicycle	42.9	32.8	24.3	34.7	37.6	27.7
Electrical engineering						
Electrical engineering ¹	48.3	26.3 ³	25.4	42.5	28.5 ³	29.0
Shipbuilding ²	60.3	33.5 ³	6.2	60.5	33.3 ³	6.2
Chemicals, etc.						
A heavy chemical	28.7	19.9 ³	51.4	29.6	20.6 ³	49.8
Household soap	85.0	6.7	8.3	79.9	10.1	10.0
Textiles						
Egyptian cotton ¹	64.1	22.5	13.4	74.4	16.2	9.4
Cotton weaving						
Printers' cloth	76.3	20.7	3.0	78.5	18.7	2.8
Clothing						
Boots and shoes ¹	63.6	23.9 ³	12.5	57.2	26.6 ³	16.2

¹ These figures refer to groups of firms, and have been supplied to the Committee as representative of the industries to which they relate. All other figures were supplied by individual undertakings.

² The figures refer to a specified type of ship and relate to the cost of the hull only.

³ Salaries are wholly or partly included in col. "Other expenses".

SOURCE: U.K. COMMITTEE ON INDUSTRY AND TRADE: *Further Factors in Industrial and Commercial Efficiency*, pp. 78-79. London, 1928.

TABLE VIII. — PERCENTAGE OF NATIONAL INCOME PAID AS WAGES AND SALARIES

Year	Belgium		France (post-war territory)	Germany (post-war territory)	United Kingdom		United States ⁴	
	Wages	Wages and salaries	Wages and salaries	Wages and salaries	Wages	Wages and salaries ¹	Wages	Wages and salaries
1913	34.0	—	43.7	45.3	42.5 ²	—	36.4	51.8
1924	38.0	—	46.3	—	41.5	48.9	37.7	56.1
1925	—	—	44.6	56.3	—	—	37.6	55.9
1926	—	—	43.6	55.6	39.2	48.0	38.1 ³	56.8 ³
1927	41.5	55.3	44.1	55.0	40.8	50.1	37.3 ³	56.8 ³
1928	—	—	44.4	56.6	40.8	50.6	36.1 ³	56.0 ³
1929	—	—	—	56.6	39.9	49.5	—	58.8
1930	40.6	52.6	—	56.4 ³	38.0	48.4	—	—
1931	—	—	—	57.9 ³	41.3	51.5	—	—

¹ Wages and small salaries up to £250 per annum. ² Figure for 1911. ³ Provisional figures. ⁴ Continental United States.

SOURCES. — Belgium. F. BAUDHUIN, quoted in *Bulletin de Statistique et de Législation comparée*, Nov. 1927, pp. 767-768, and F. BAUDHUIN: "Le revenu national en 1930", in *Bulletin d'Information et de Documentation*, 5th year, pp. 373-377.

France. M. HUBER: *La population de la France pendant la guerre, avec un appendice sur les revenus avant et après la guerre*, pp. 942 and 957.

Germany. *Statistisches Jahrbuch für das Deutsche Reich*, 1932, p. 526.

United Kingdom. C. CLARK: *The National Income, 1924-1931*, pp. 72 and 140.

United States. W. I. KING: *The National Income and its Purchasing Power*, p. 80.

1929. — Estimate of the amount of wages and salaries by the American Federation of Labour, and of the national income by the National Industrial Conference Board, allowance being made in the latter for the value of the services rendered by durable consumers' goods on the basis of an estimate by the National Bureau of Economic Research. (Cf. *Bradstreet's Weekly*, 12 Nov. 1932.)

